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VOL. 149—NO. 17

Telephony

THE JOURNAL OF THE TELEPHONE INDUSTRY

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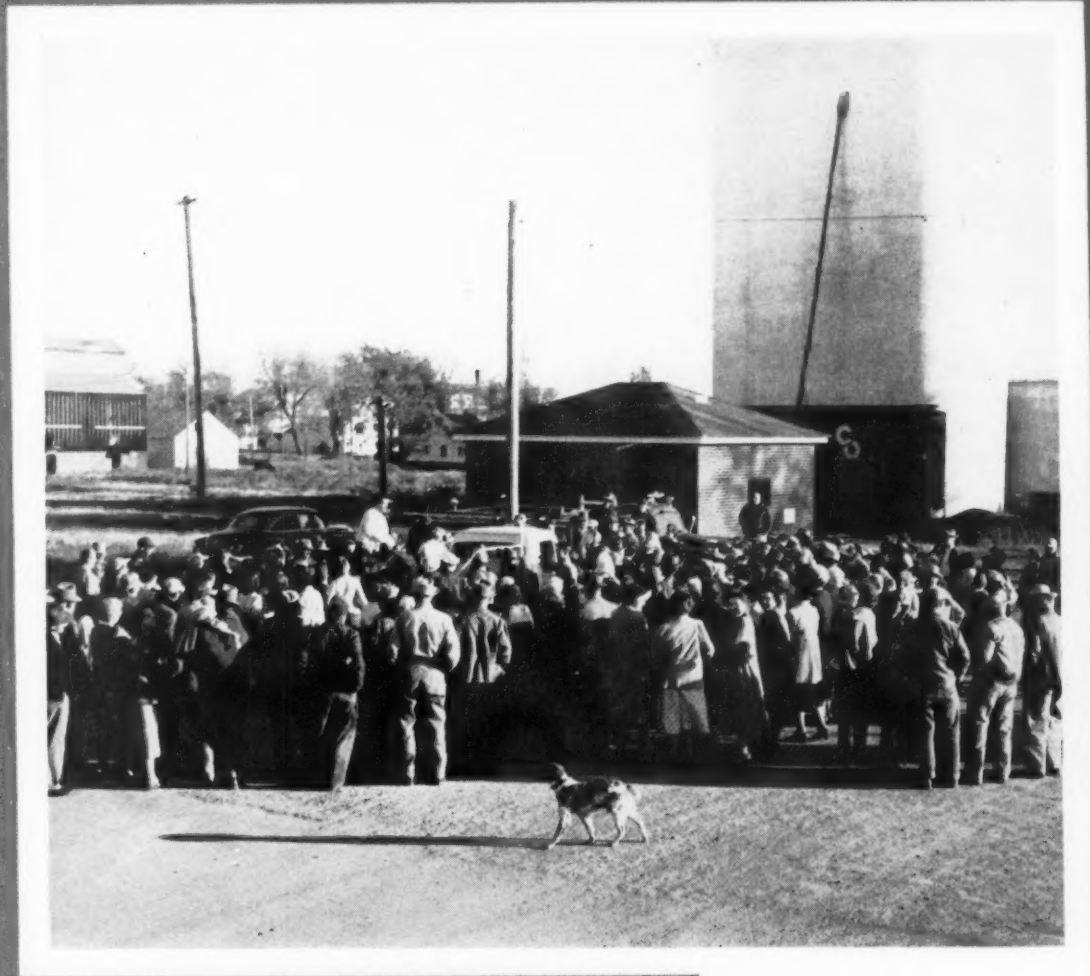

OPEN HOUSE

Open houses are good public relations builders. Here's part of group watching a demonstration at an open house after Orient exchange of Creston (Ia.) Mutual Telephone Co. was converted recently.

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CONVENTION REPORT ISSUE

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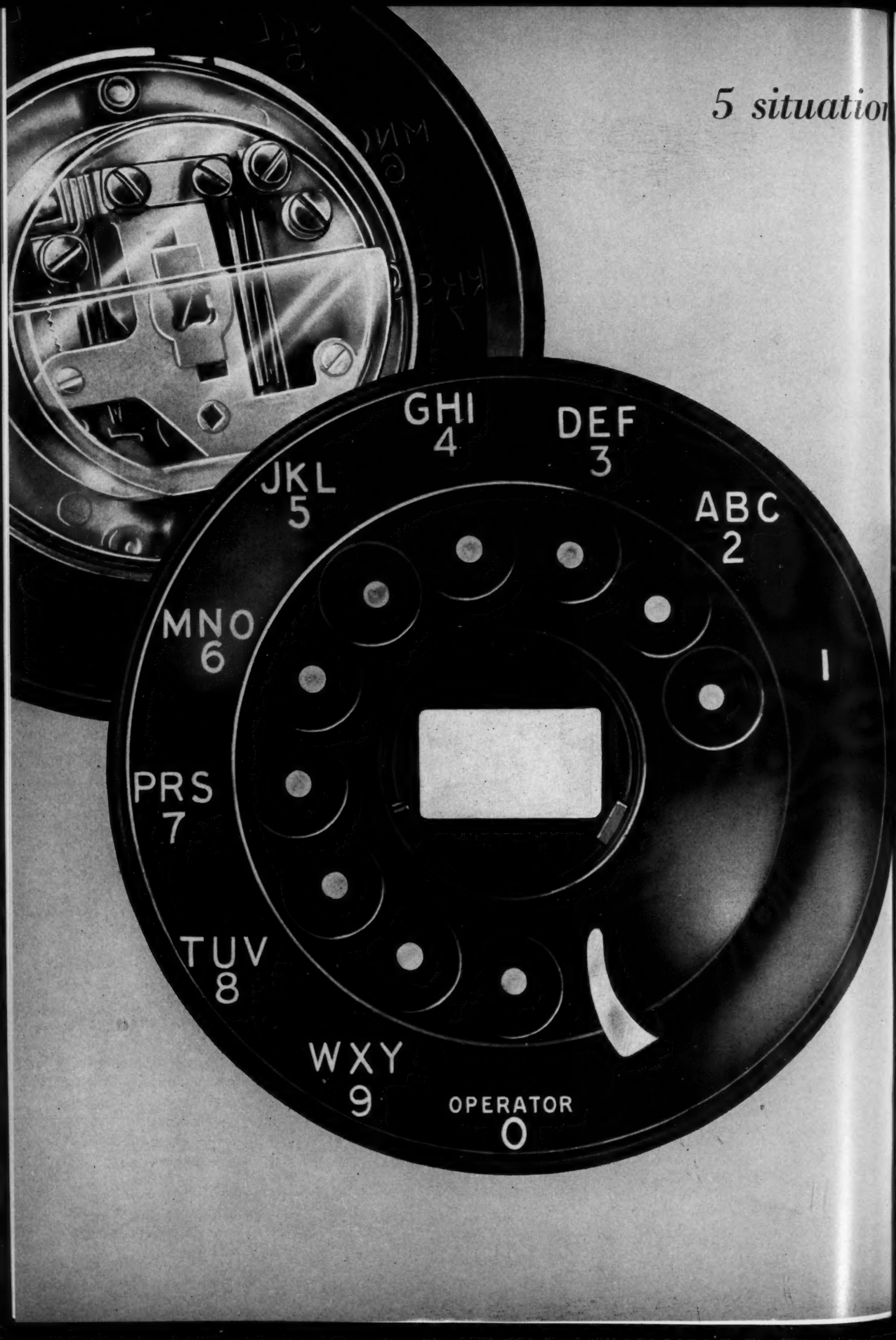
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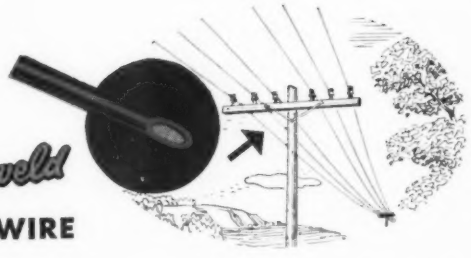

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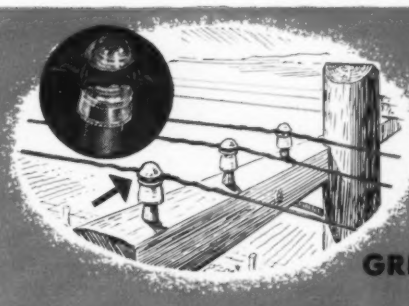
*Trade Mark



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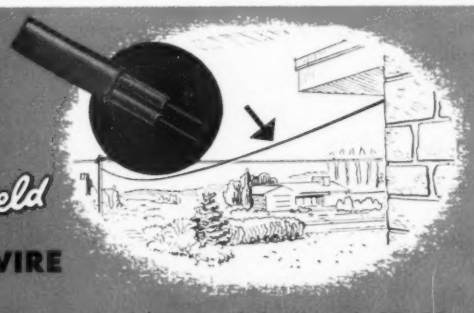

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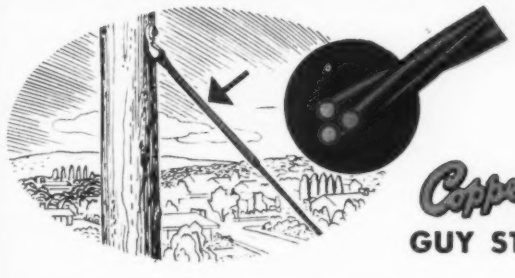

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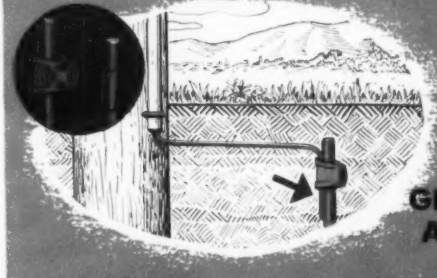

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FLASHES AND PLUGS

SEASONAL LARCENY. A women telephoned police on Sept. 29 and said her television set had been stolen while she was out shopping, reports a Canadian news dispatch. The sergeant of detectives took all the particulars.

As he filled in the report, the woman called back to apologize for all the trouble. Seems her husband had taken the set to his office to watch the World Series.

•

A POLE-TICE IS IN ORDER. An Oklahoma City, Okla., newspaper recently observed that a parolee from California probably will be in for a lot of kidding if he ever gets back into the federal prison at Leavenworth, Kan.

Police said the man was on parole from California for forgery and had recently been released from Leavenworth after serving a term. He tried to cash a $31 check at a grocery store in Oklahoma City.

The clerk became suspicious and the parolee ran out the door. As he turned to look over his shoulder, he ran smack into a telephone pole and still was lying there unconscious when police arrived.

When revived, he admitted cashing four bad checks earlier in the evening.

•

HONESTY PAYS OFF. A Des Moines businessman took a cab to a downtown building during the World Series and told the driver to wait a few minutes until he transacted his business. He then became so engrossed in the game, that by the time he returned to the street, the cab was gone.

He called the cab company, arranged to pay the bill and left a considerable tip for the driver. It all consumed most of his winnings on the game.

•

NO IDLE BOAST. An assistant postmaster general in England announced with some pride recently that the British post office "can deliver anything—even a cow."

A farmer in Bourne End said "pooh," and called the post office.

"I want to mail a cow to Bracknell," he said.

To his astonishment the postmaster replied, "We'll call for the package."

In short order a truck drove up, took aboard a bossie named Flossie II and hauled her to Bracknell, 15 miles away.

The postage?—$9.94.

•

HOLDOUTS. An 82-year-old San Diego, Cal., woman telephoned police headquarters recently after she and her 88-year-old husband read about Civil Defense plans to evacuate the city if it is threatened by a hydrogen bomb attack.

"I just called to tell you we're not going," she said and hung up.

CIRCULATION

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Telephony

THE JOURNAL OF THE TELEPHONE INDUSTRY

Since 1901

October 22, 1955

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USITA Convention Report

By R. C. Reno

IN "WRITING UP" a convention, a reporter endeavors to sum up the "theme" of the meeting, or interpret just what it accomplished, or how it benefited those in attendance, based on his own observations while attending the convention.

During the two days following his departure from the Conrad Hilton Hotel in Chicago, this reporter looked back over the three-day convention of the United States Independent Telephone Association, held Oct. 10, 11 and 12, and summed up, in his mind, "what he thought he saw" at the Independents' meeting.

Usually, a convention report is devoted to a summary of addresses, but inasmuch as all the papers presented at the USITA convention are produced in full in this issue, we would like to use this space to make a few observations concerning some important trends among the rank and file of Independent companies, which are based on conversations with both operating and manufacturing personnel at the convention.

Here they are:

(1) There was much evidence at the convention that more and more Independent companies, particularly smaller companies, are becoming aware of the urgent need for them to immediately expand and improve both their exchange and toll service. Many of those who, by their own admission, have been putting off expansion and improvement programs, now realize that "yesterday's" service standards will not and cannot satisfy today's requirements and if they are to remain a part of the nationwide telephone system, and stay in business, they must modernize at once.

The increased interest shown at the convention by the smaller companies in "going dial" and in Operator and Direct Distance Dialing, among other things, indicated to this reporter that a greater number of companies are becoming more conscious of their responsibilities to serve the public.

(2) According to some of the manufacturers' representatives, their exhibits were "swamped" this year as a result of increased interest in new and up-to-date equipment the manufacturers and suppliers are providing Independent companies to enable them to render modern service.

Especially, was there interest in new central office automatic switching equipment, automatic toll ticketing systems, microwave radio, carrier, electronic office and billing machines, microfilming, and a host of other modern equipments being adopted by progressive telephone companies.

(3) The merchandising and selling of telephone services certainly has taken hold in the Independent field, if comments and conversations heard at the convention by this reporter are any indication. Everywhere we found operating men discussing what they are doing, and what they plan to do, to boost revenues through programs to sell colored telephones, PBX's, recorders, telephone answering devices, key and loudspeaker telephones, extensions, outside paystation booths, etc.

Yes, Independent companies seem to be on their way in getting their greater share of their customers' dollars.

(4) Greater interest in specialized training of both management and employes, a long-time need in the Independent industry, was evident at the USITA convention. Plans to give key men business management courses conducted by various leading universities, and to establish company training courses for personnel in other departments, are being discussed by many companies.

Personnel training is one of the "musts" for the Independent industry, if it is to attract and hold its share of young men entering business, and it was refreshing to see the interest shown in this project at the convention.

(5) Never before did we hear so much "talk" on the subject of financing, as at this year's convention. Judging by what this observer heard, more and more smaller companies are becoming aware of the fact that they must "get their houses in order" if they are to attract new capital with which to finance expansion and rehabilitation of their plants and what's more some of them

Vote of Thanks

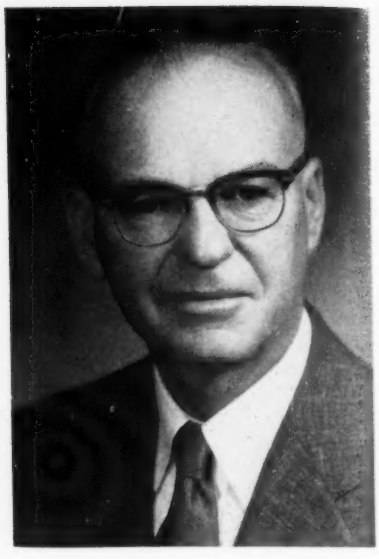
Ray Blain, TELEPHONY's photographer emeritus and technical editor, took all of the photographs of the USITA convention appearing in this issue. We want to take this occasion to thank him for his continued efforts to capture on film the spirit of the convention.

We also want to thank the many delegates who stood still for Mr. Blain.

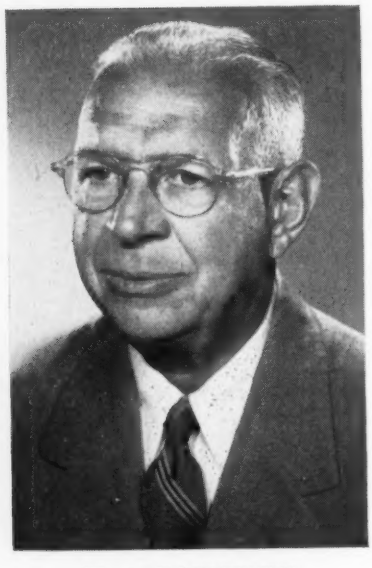
So as not to delay publication of this issue, Mr. Blain, as in the past years, equipped the bathroom of his hotel room as a developing laboratory in order to speed the convention photos to the engraver.

M. M. HALE
President

D. C. POWER
First Vice President



C. W. HAAS
Second Vice President



H. A. BARNHART
Third Vice President

reported they are finding sources of *private* capital showing more interest in financing small companies.

This latter point was emphasized by the attendance at this year's convention by representatives of more banks, insurance companies and investment bankers. This reporter had the pleasure of talking with these men and he found they were interested in the financial needs of Independent companies.

This interest no doubt has been generated, to some extent at least, by the recent entrance into the small company financing field, through a "standard" loan agreement, by one of the country's largest life insurance companies—a result of several months' conferences and negotiations between representatives of the insurance company, several operating companies and the editor of TELEPHONY.

These, of course, are not all of the industry trends noted at the convention

C. S. BAILEY
Executive Vice President

C. D. BROREIN
Treasurer

New USITA Officers

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M. M. HALE, Lincoln, Neb.

First Vice President
D. C. POWER, New York, N. Y.

Second Vice President
C. W. HAAS, Big Timber, Mont.

Third Vice President
HUGH A. BARNHART, Rochester, N. Y.

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CLYDE S. BAILEY, Washington, D. C.

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Secretary
GEORGE C. RICHERT, Washington, D. C.

Assistant Secretary
COURTNEY S. SNYDER, Washington, D. C.

G. C. RICHERT
Secretary

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HUGH A. BARNHART, Rochester, Ind.
T. A. BOYD, New York, N. Y.
W. B. CLAY, Hutchinson, Minn.
L. D. DENSMORE, Lincoln, Neb.
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L. W. HILL, Tarboro, N. C.
R. A. LUMPKIN, Mattoon, Ill.
C. C. PEARCE, Riceville, Ia.
R. E. SHOTTS, Chicago, Ill.
R. C. TAIT, Rochester, N. Y.

by the writer, but they are indicative that Independent telephony is "on the march." USITA conventions have been one of the forces providing the impetus for the progress of the industry. This year's meeting was no exception.

Gen. Carlos P. Romulo, Philippine Islands ambassador to the United States, was one of the featured speakers at the USITA convention and as his address—entitled "Today's World—Tomorrow's Goals"—was not in manuscript form a summary of his remarks follow:

"America's greatest strength lies in its spiritual power, less than in its materialistic achievements—the intangibles of the spirit in which America as a nation is immeasurably rich," General Romulo stated.

For his main example of this spiritual strength, General Romulo cited the Declaration of Independence statement that all men are created free and equal. Keep faith with that principle, he said, and victory in the global conflict is assured.

He recalled how when the United States took over the Philippines from the Spanish, Americans were hated like any occupying nation. However, when William Howard Taft announced American policy as: "The Philippines for the Filippinos," and the United States carried it out to ultimate independence for the islands, that, he said, was a "breath of fresh air in Asia and duly impressed Asians."

General Romulo traced recent world history up to today's "troublous times and critical days." Following World War II, United States forces were demobilized very fast while Russia retained her military might. This was consistent, he said, with Russia's fundamental aim: World conquest. He reviewed the subsequent enslavement of the European Iron Curtain countries—Poland, Czechoslovakia, Rumania, Hungary, Latvia and the others.

Then he said, while economic aid was helping to contain communism in Europe, on the other side of the world, 650 million Chinese fell under Communist domination and were soon used in the Korean War, in which Russia lost not a man.

General Romulo quoted Lenin, the Russian, who said, "The road to London and Paris is through Peking and Calcutta." In other words, Romulo said, Russia must first conquer Asia to later conquer Europe and the United States. And that is why, he added, in today's world, American eyes are focused on a Pacific Ocean chain of defense embracing the Aleutian Islands, Japan, Korea, Okinawa, Formosa, Guam and the Philippines. He cautioned that in terms of defense, the chain is our next door neighbor, because modern technology, with its guided missiles, Snorkel submarines and long-range bombers, has annihilated the Pacific Ocean.

General Romulo noted that one more major nation in Asia falling to communist domination would give communism a majority of Asians which would be a powerful propaganda tool. He went on:

"These are truths we must know in the fight against the godless ideology known as communism. What good would all your telephones be if we lose this fight? It is basic, primordial—we must not lose—we have to make friends with the people of Asia."

Summing up, General Romulo said, "In American dealings in the Philippines, the United States followed the Golden Rule. Thus the rank and file of Americans with their clean, wholesome consciences were not swayed by the tinkle of gold dollars nor swerved by vested interests when Philippine independence was voted."

He said he was not asking us to repeat what it took 50 years to accomplish—time is too short for that. But, he asked that America exert its influence with its allies (including those receiving aid from us) to have them deal with their subject peoples in a manner such as to respect the dignity of the human soul and to more nearly make ideals coincide with actions. This, he said, would go far toward insuring freedom and victory.

Names of USITA directors elected by the convention, of officers elected by the directors, and of the executive committee of the association, are given in boxes accompanying this report.

It was announced that the 1956 USITA convention would be held at the Conrad Hilton Hotel in Chicago on Oct. 15, 16 and 17.

The report on the annual meeting of the Independent Telephone Pioneer Association, held on Oct. 11, will be presented in the Oct. 29 issue of TELEPHONY.

Each year, in its issue reporting the convention of the United States Independent Telephone Association, TELEPHONY has reproduced all of the papers and addresses delivered at the convention in full, with the exception of addresses given at the Plant Conference. The plant papers, in past years, have been published in subsequent issues.

However, this year all addresses, including those published at the plant conference, are contained on succeeding pages of this issue.

Presenting the USITA convention in print in such a short time following the convention is a costly procedure and taxes the TELEPHONY staff in getting out the issue by its publication date. However, we feel that "giving" all of those who are unable to attend the USITA convention the meeting in print is well worth the cost and effort.

We hope that all of those who did not get to attend convention sessions and conferences, and those who were not able to attend the convention at all, will read this issue thoroughly in order to get the benefit from the worthwhile addresses presented at the convention.

After all, conventions are an important phase of the telephone business and much time and effort is expended by the USITA staff and speakers to see that they provide information which will help every telephone company, of every size, in the operation of its business. If telephone men and women do not attend the conventions, or take the time to read what transpires at them, then the work of those planning and taking part in conventions is, to a great extent, wasted.

In presenting this issue, TELEPHONY, again, is contributing to the over-all effort to help Independent telephone men and women to get the most out of this year's USITA convention, which really was planned and held for them.

New USITA Directors

Re-elected

E. G. BELLAMY, Knoxville, Ia.
F. E. BOHN, Fort Wayne, Ind.
C. D. BROREIN, Tampa, Fla.
RAY DALTON, Everett, Wash.
H. E. HAGEMAN, Lorain, O.
A. L. HART, Kansas City, Mo.
C. D. MANNING, Chicago, Ill.
C. C. PEARCE, Riceville, Ia.
D. C. POWER, New York, N. Y.
R. E. SHOTTS, Chicago, Ill.
R. C. TAIT, Rochester, N. Y.

Elected

F. G. LaPRADE, Martinsville, Va., to succeed B. L. FISHER of Martinsville, deceased.

J. J. CLERKIN, Chicago, Ill., to succeed R. B. STILL of Bloomington, Ill., resigned.

What are the Problems In the Next 10 Years?

By DONALD H. CAMPBELL
USITA President

DO YOU KNOW why the United States Independent Telephone Association is the dominant force in the field of Independent telephony? I did not fully realize it until you gave me the opportunity to serve as your president. Let me briefly tell you what I have learned.

We have an association of members who are willing to do more than belong; we have an association of members who are willing to participate. The effect of this participation in the past cannot be overemphasized. The importance of this, on even a greater scale in the years that lie ahead, cannot be overstressed.

This participation I found stemmed from the effectiveness of our full-time staff organization at the United States Independent Telephone Association's headquarters in Washington, D. C., headed as you know by our Executive Vice President Clyde Bailey. So far as Clyde is concerned, my highest praise falls short of my deep appreciation for his contributions to our association. It stemmed, also, from an alert, cooperating board of directors, ready, willing, and able to benefit all of us through our association with their time, services, and advice. It came into full bloom through the various standing and special committees which were set up and functioning effectively on the numerous special matters under their respective jurisdiction. You see I learned we had a well-established going concern.

While my own background as a member and director of this organization for many years had given me a certain amount of familiarity with its affairs, no one who has not had the personal experience of coming into firsthand contact with all this can truly appreciate the high caliber of teamwork and devotion to our common aims which go into your national association activities. I might add that I have called on no one to serve on committees or other assignments without receiving a satisfactory and generous response. For this and other favors and considerations shown to me, I am most thankful to the entire membership.

I mention that somewhat personal experience by way of approach to the broad topic I would like to cover in my talk with you today. I have entitled it "What are the Problems Facing Us During the Next 10 Years?" Believe me, friends, the task which lies ahead of us during the next decade will require and make good use of all of the organization, all of the cooperation, and devotion which I have mentioned.

We will need the continued good-will and active assistance of our entire membership, not once but repeatedly, if we are to meet the challenge of the times to our Independent telephone industry. And, so I ask you, on behalf of those who will come after me, to keep up the good work and occasional sacrifices in time and attention which the demands of your association may put upon you in coming months—to do a number of things which have to be done from time to time—such as writing letters, filing reports, serving on committees or handling special assignments.

The main reason we of the Independent telephone industry must continue strong in our internal organization to meet the demands of the future, is to be found in the dynamic nature of the business in which we find ourselves. We all know that America is a fast growing country and that the history of our own industry shows that the passage of time has always placed upon us a growing demand for service far exceeding mere population growth. There is no reason to believe that it will be otherwise in the future.

Your association will continue to help you, as it has in the past, to set up the long-range programs which will be necessary to meet the challenge of the future. I should like to refer briefly to two recent examples of the work of the association in this regard. One was the launching of a national advertising program; the other was the adoption of a new emblem, placing all of us in the industry under a new, single, recognizable symbol.

With respect to the advertising program, your board of directors has it under constant study. They believe that the high quality advertising messages in magazines of nation wide circulation are making new and better friends for our companies. They believe you will feel the practical results of this organized public relations effort in many ways. For example, they suggest you will feel the effects of the program when you seek new capital for plant expansion from financial people and when you approach regulatory bodies for rate relief. They believe you will feel it in improved employe relations, and in the community and service area levels in dealing with the general public.

With respect to the service emblem, as you know, there is also now available to all of our member companies a new emblem for use in your local advertisements, in your company publications, your annual reports, in brochures, catalogues, directories, letterheads, on telephone booths, and service trucks. By adopting and widely using the emblem, all of us can better share in the beneficial impact of this great organized drive of the national pro-

gram to develop and maintain public good will for all Independent companies. I bespeak for the many and varied uses of our new emblem your cooperation and your support.

It is not for me to review further the year's activities and achievements. That has been done in his usual capable and sparkling manner by our executive vice president in a comprehensive report that will be made available to you.

Before we peer into the future and try to see what may be in store for us, I would like you to take a look with me back over the last half century of the telephone industry to see how far we have come. Ordinarily, we need to look backward only to profit from the experiences of the past, and usually our time is better spent in looking ahead to make certain we are preparing adequately for the opportunities of the future. But, today, I feel justified in taking a little of your time to review a few of the significant milestones left behind, so that we can get a better perspective of the visible and invisible markers of the road that lies ahead.

The past 50 years have been among the most eventful years in the history of our country and of the world, and they certainly have been eventful ones from the standpoint of the telephone business. They have been years of social and economic upheaval, years of change and innovations, years of great development and expansion, and years of many new inventions.

Those of you who are as old as I am will remember the business recession during the years immediately following World War I; followed by the boom years of the late twenties and then by the long depression of the thirties, which brought unemployment and grave problems to all business. Scarcely had we pulled out of that when along came World War II, increasing our activities, our problems and our responsibilities, but curtailing growth and expansion. When World War II ended in August of 1945, we were met with a backlog of orders for peacetime equipment and articles. After too few years of peace and quiet came the "police action" in Korea, with its attendant anxieties and shortages. Then the truce of 1953 and the biggest business year in history, followed by an almost as good 1954 and 1955.

Left to right: Alvin Glick of Birdsboro, Pa.; Henry Y. Smith of Columbia, Pa.; W. B. Brossman and C. E. Eaby, both of Ephrata, Pa.; J. K. Stoltzfus of Birdsboro, Pa.; H. M. Stewart of Cornelia, Ga.; Mrs. C. E. Eaby of Ephrata, Pa., and S. B. Green of Ellijay, Ga.

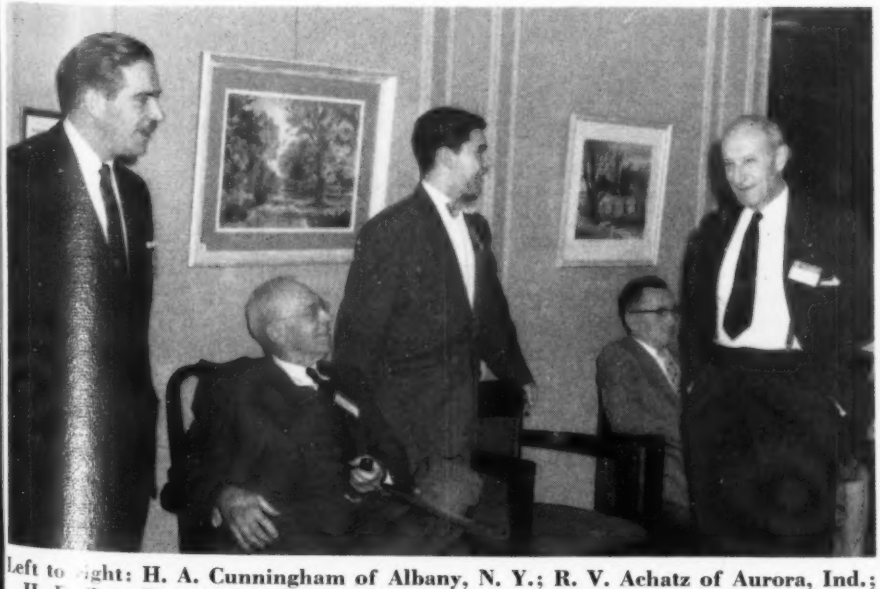
Now, how about the telephone business during those hectic 50 years? Anyone who attended the conventions of the United States Independent Telephone Association in its early history around the turn of the century scarcely would recognize the telephone industry of 1955. The progress we have made did not come overnight. It took long years of effort on the part of thousands of telephone people pioneering with new methods and devices. Social, governmental and economic changes, coupled with a large growth in population and the development of hitherto sparsely settled areas—all were factors which jolted us into action.

Alert telephone people moved in to supply the additional telephone facilities needed to serve the additional millions. Methods and equipment that would do the job better, faster, and more economically were devised by the brawn of our industry. Beginning about 1910, magneto began to give way to manual; then manual yielded to dial; now about 85 per cent of the telephones in this country are automatically operated. And now full electronic offices are moving into the picture. We all are highly mechanized. Increased mechanization is the crying necessity of the hour. Higher minimum wage levels in our 24-hours-a-day business and other factors by governmental fiat are making automation compulsory.

Since widespread acceptance of the dial, we have seen many new innovations in communications. They have included mobile radio telephones, the coaxial cable, plastic cable, automatic toll dialing, automatic toll ticketing, ingenious timing devices, voice recorders which take down messages when you are not in your office or home to answer your telephone, direct distance dialing, the solar battery and the "no-hands" telephone, to mention only a few.

Yes, we've had them all, good years, bad years, fair years and boom years. If they've taught us nothing else they have taught us how to be flexible and adjustable; in order to survive we've had to acquire the habit of rolling with the punches.

What about future devices and improvements? The possibilities are so startling that one hates to mention them for fear he will tax the credulity of his listeners.



Left to right: H. A. Cunningham of Albany, N. Y.; R. V. Achatz of Aurora, Ind.; H. E. Purcell of Rising Sun, Ind., and W. J. Scheidler of Greensburg, Ind.

You and I know the best telephone has not been designed; the best switching system has not been developed; the best distribution system has not been conceived. There is nothing that we do that can't be done better. In short, we haven't stolen the show from the folks who will operate our industry during the next 10 years. One of the big problems of the next 10 years, therefore, is that of accepting the obsolescence of much of what is now used.

Only last month in San Francisco, Bell System engineers gave a demonstration of telephone-television. Some of you probably saw it in the news reels. The party calling from one end of the line could see the party calling from the other end, and vice versa. The effect is said to be somewhat similar to holding a conversation with someone speaking to you right out of a moving picture screen. I understand the cost of such an installation currently would be $5,000 per subscriber, which means our companies won't be selling many of them right away! But who will predict how long it will be before telephone-television will be practical? Just think of the possibilities when you call up your wife to tell her you'll be home for dinner, and you give her an opportunity to see the friend you are bringing with you.

All this, of course, is old stuff to electronic engineers who long ago recognized the possibilities of communications along these lines and along other lines yet to be explored. Just a couple of years back, when he was retiring as chief engineer of the American Telephone & Telegraph Co., after 42 years of service, Dr. Harold S. Osborne told us about telephone possibilities which stagger the imagination even of the space-world cartoonists. His words have been quoted before, but I think they are worth repeating.

"Let us say," commented Dr. Osborne, "that in the ultimate, whenever a baby is born anywhere in the world, he is given at birth a number which will be his telephone number for life. As soon as he can talk, he is given a watch-like device with 10 little buttons on one side and a screen on the other. Thus equipped, at any time when he wishes to talk with anyone in the world, he will pull out the device and punch on the keys the number of his friend, then, turning the device over, he will hear the voice of his friend and see his face on the screen, in color and in three dimensions. If he does not see him and hear him he will know that his friend is dead!"

Those of you who read your newspapers thoroughly learned a few weeks back that electronic scientists now are working on a device that will read people's minds. Now, I don't know about the rest of you, but I draw the line at that! The scientists say that this nosy little gadget is still in the early development stages, and that it won't be ready for at least five years. Well, thank God for that! Can you imagine what trouble one of these mind-reading machines, geared with telephone-television, could get a man into?

Left to right: Jacob Haberfeld of Jerusalem, Israel; George C. Richert of Washington, D. C., and Carl D. Brorein of Tampa, Fla.

More recently, President A. F. Jacobson of the Northwestern Bell Telephone Co., said:

"Although rapid progress in telephony makes it 'impossible to prophesy' what television service will be like 20 years from now, and the full future value of such developments as the transistor and the solar battery 'cannot yet be imagined' the future by 1975 probably holds the following:

" 'A telephone in nearly every room of the average home; routine transcontinental dialing; portable personal radio-telephones, rural private line service; available combined telephone and television service; wide use of the speakerphone (hands free telephone); rapid and easy transmission of graphic records (facsimile); and common use of vehicular, train, and airplane mobile service.

" 'It is our sincere hope that by 1975 telephone service will be playing the part it is technically capable of playing, of bringing the people of all nations together in business and social contacts even as it does within our own country today.' "

What about the market for these things? Well, we don't know yet, but we are finding out that up until recently, at least, we scarcely had scratched the surface of possibilities in selling the services and equipment already available. New ideas and new methods of merchandising will play a vital part in our future operations. . . .

During the last minute I have been talking to you, six babies were born in these United States—and three people died. If this continues, it doesn't take much arithmetic to reckon what our population growth is going to be during the next 10 years. As our population grows, cities are hard-pressed to provide for people's needs—both as to residential and as to industrial housing. So we find them moving out into the suburbs, into our smaller cities, and into our rural areas—many of them in Independent company service areas.

Here is what President Eisenhower said in his 1955 Economic Report to Congress:

"Our population is rapidly increasing, educational levels are rising, work skills are improving, incomes are widely distributed, consumers are eager to improve their living standards, businessmen are actively engaged in starting new enterprises and expanding old ones, the tools of industry are multiplying and improving, research and technology are constantly opening up new opportunities, and our public policies generally encourage enterprise and innovation. With so many favorable factors a continuation of rapid economic growth may reasonably be expected."

The expectation is a 500 billion dollar economy by 1965 that would be 143 billion dollars more than last year.

In view of these facts—in view of all this decentralization of industry and business growth, it probably is superfluous for me to stand up here and tell you what some of our problems are going to be during the next ten years.

We do not have to be economists to realize that our basic problem, in the months and years ahead, is going to be revenue requirements. I am assuming, of course, that our nation—despite the threats of international conflict—will be permitted to go forward without catastrophic war—which is the only kind of war the major powers could possibly wage under prevailing circumstances.

It is true, price levels have stabilized somewhat from the rapid inflation of the early fifties. The more serious consequences of regulatory lag between

(Please turn to page 109)

Report of USITA Executive Vice President

By CLYDE S. BAILEY

THIS REPORT will undertake to give a summary of the principal activities in which our association has engaged during the past 12 months. It will relate principally but not exclusively to matters in Washington of interest to Independent telephone companies to which it has been necessary to give attention. It will touch only the high spots of association committee activity for the reason that these groups will themselves have reports to present to this convention.

The past year has been one of the most active in the long history of the association. This has been especially true on the legislative front, on nationwide toll compensation studies, and on matters pending before the Federal Communication Commission. The increase in the size of our branch of the telephone industry with a doubling of plant investment and the number of stations served during the past 10 years has expanded the sphere of our activity. The march of technology in which advantage has constantly been taken of advances in the telephonic art gives rise daily to new problems upon which the aid and assistance of the Association's fulltime staff and of unpaid committee personnel is constantly sought by member companies.

These circumstances have provided the association with enlarged opportunities for service to the industry. They have also emphasized the need for and the value of the kind of leadership the association is qualified to give. . . .

On the Legislative Front

Let us now proceed to discuss several pieces of legislation in which we interested ourselves at the last session of Congress. Appearances on behalf of our association were made on several bills that touched or gave promise of touching the welfare of our companies. . . .

Minimum Wage

Anyone lacking a philosophical understanding of the vigor and effectiveness of political forces in our country would wonder how a bill as important to the economic life of many industries as one increasing the minimum wage could receive such apparently slight attention as the one which passed the Senate on June 8.

On that day with only an hour or so of debate and with a bare handful of senators joining in it, the Senate by voice vote passed a bill reported by the Senate Labor Committee calling for an increase in the minimum wage from 75 cents to one dollar. The committee report had been on the desks of senators less than a day. They could not possibly have had time to read it, to say nothing about having an opportunity to study the voluminous testimony of a hundred or more opposition witnesses who appeared at Senate sub-committee hearings.

The atmosphere had been surcharged with propaganda and pressure for an even higher minimum. Walking through the corridors of the Capitol and Senate and House Office Buildings were a hundred or more poorly dressed workers with CIO and AFL badges demanding $1.25. The scant deliberation that took place on this legislation in the Senate pinpointed the unfortunate fact that the question of wages in Congress was not entirely one of economics.

The House on July 20 approved an increase in the same amount by the overwhelming vote of 362 to 54. Like the Senate, the House earlier rejected amendments proposing to make the minimum 90 cents as had been recommended by President Eisenhower.

The bill as passed by the Senate called for an effective date of Jan. 1, 1956 while the House bill set Mar. 1. Following a Senate-House Conference report both branches agreed upon the latter date, and in that form the bill was approved by the President.

This legislation ranked high on the agenda of our association. Chairman McFarlin of our Employment Relations Committee gave able testimony at both Senate and House hearings concerning the impact upon Independent telephone companies and their subscribers of any increase whatever in the minimum. He and members of his committee spent considerable time in Washington carrying the torch of knowledge. Many individual representatives of Independent companies also came to the nation's capital in a desire to be of assistance. Your executive vice president and other association officers put their shoulders to the wheel. But the die was probably cast even before committee hearings were held on the merits.

As a last resort I addressed a letter to President Eisenhower asking him to veto the bill if it should come to him with a higher figure than the 90 cents he had recommended. In the meantime the Secretary of Labor, who at congressional hearings had earnestly advocated a 90-cent minimum, recommended to the President that he accept the $1.00 bill.

That the new minimum will require subscriber rate increases in many, many instances scarcely admits of doubt. Last summer we recommended to state associations that they form task force groups to call informally upon regulatory commissions in order to emphasize the need for acting promptly on rate applications as a means of cushioning the impact of higher wages. It is to be hoped that state commissions will adopt suitable

procedures necessary to handle expeditiously the volume of rate increase applications likely to come before them. . . .

Operator Exemption

There were two sources of consolation so far as congressional action on minimum wage legislation was concerned. One was that the new minimum was not $1.25 as had been proposed by a number of bills introduced and advocated by the CIO and the AFL. That attempts will be made to push the figure to that amount, however, in a few years if inflation continues seems almost inevitable.

The other consolation was that the bill did not in any way disturb the switchboard operator exemption now in the law. But this consolation also was a qualified one because it was made quite plain that a review and reexamination of all exemptions now in the law will be made by Congress at the next session. President Eisenhower in his State of the Union Message last January advocated general expansion of the coverage of the Fair Labor Standards Act. Secretary of Labor Mitchell when testifying last May before the Senate Labor Committee asked that all existing exemptions be examined for the purpose of determining which should be eliminated. The CIO and the AFL have ardently advocated repeal of all exemptions and the CWA has asked for repeal of ours specifically. The Senate Labor Sub-committee when reporting out the $1.00 minimum wage bill said hearings on revision of the exemption section of the statute will be held early in the next session.

It is scarcely necessary to remark that repeal of our exemption would be certain to drive many of our small companies to the wall. It would also be a blow of serious proportions to many larger companies with multiple exchange operations. Most of the larger operations are such merely because they happen to have a substantial number of small units doing business in individual small communities. The exemption situation facing our companies generally is thus one of the utmost gravity. It calls for a most painstaking educational program calculated to acquaint every member of Congress with the merits of our exemption and the imperative need for retaining it. . . .

Learner Regulations

The Wage-Hour Act provides that the administrator "to the extent necessary in order to prevent curtailment of opportunities for employment, shall by regulations or orders, provide for the employment of learners . . . under such certificates . . . at such wages lower than the minimum wage applicable . . . and subject to such limitations as to time, number, proportion, and length of service as the Administrator shall prescribe. . . ."

Left to right: F. G. LaPrade of Martinsville, Va.; Kelley McNish of Bristol, Tenn.; W. G. Wright of San Angelo, Tex., and W. S. Bain of San Antonio, Tex.

Recognizing that a higher minimum wage would make necessary a revision of the existing regulations applying to the employment of learner switchboard operators, our association last summer asked the administrator for an informal hearing or conference on this subject. The existing regulations, in effect since a 75-cent minimum became effective Jan. 25, 1950, have because of their restrictive provisions proved unsatisfactory and only a relatively few Independent companies have availed themselves of them.

An informal hearing was held in Washington at the offices of the Wage-Hour Division on Sept. 15. Representatives of our association who presented statements or otherwise participated were: Chairman McFarlin of our Employment Relations Committee, Mrs. Mayme Workman, W. C. Henry, C. C. Pearce, Harry W. Pike, myself, and Secretary George C. Richert. Unions represented were the CWA and the IBEW.

Our association asked for several changes in the regulations, the principal ones being an increase in the length of the learning period from 480 hours to 720 hours, and a lifting of the virtual bar against application of the regulations to exchanges having more than 2,000 stations. The union representatives opposed the adoption of any regulations whatever permitting subminima.

We shall hope the Wage-Hour Administrator will recognize the need for dealing realistically with this matter so as to cushion to some degree at least the impact of the new minimum. . . .

Highway Relocation Costs

One of the issues that will be before Congress at the next session is federal aid highway legislation. With the pressure for more and better roads and a national defense slant given to the need, some kind of a bill is almost certain to go through. When it does, telephone companies and other utilities want to be sure it provides for reimbursement of facility removal costs.

You will recall that although approved by the Senate, reimbursement provisions were rejected by the House at the last session by the almost overwhelming vote of 75 to 125, just prior to a vote that also killed all highway legislation. The defeat of the reimbursement provisions was all the more significant because of the fact that though the Senate bill called for payment of 50 per cent of removal costs, the bill voted on in the House limited payment to 2 per cent of the federal aid funds allocated to specific projects, and even then payment would have been on only a permissive basis.

The politically powerful state highway departments, well known for their anti-diversion stand, whipped very badly the proponents of reimbursement. Congressman Gentry of Texas, a former state highway commissioner and a former head of the association of such commissioners, declared on the House floor that all state highway officials were opposed to reimbursement.

A big job of education by all interested proponent groups must be done on this problem if success is to be achieved when highway legislation comes up at the next session. Other utility groups are taking various measures to help in the undertaking. The Independent branch of the telephone industry must do its part. Much of the work must be done in the field be-

fore Congress convenes in about three months from now.

A big order? Yes; but the goals amply justify the means. Many Independent companies would be embarrassed to a high degree if they should have to absorb the inevitable costs that would come from moving substantial parts of outside plant if President Eisenhower's huge federal aid highway construction program or anything like it is approved. . . .

Repeal of Security Exemption

The Securities Act of 1934 provides that securities may be issued by any corporation in any year up to the amount of $300,000 without observing the registration requirements of the Securities and Exchange Commission. A bill to repeal this exemption, introduced by Congressman Bennett (R., Mich.), was the subject of hearings last July before a sub-committee of the House Committee on Interstate and Foreign Commerce. While the author is primarily interested in protecting the innocent investor against spurious securities, such as cheap uranium stock, the bill is so drawn as to call for the repeal of the exemption as to all securities.

Our association was represented at the hearings by our counsel who expressed opposition because of the expense of registration that would be incurred in the event of repeal, an expense disproportionately large in the case of small issues. Our association asked that telephone companies be excepted from any repeal that might be determined upon. The Central Electric & Gas Co., a holding company with Independent telephone property, through its counsel, presented testimony in support of retaining the exemption and in opposition to the Bennett proposal.

Chairman Armstrong of the SEC opposed the bill both on behalf of that government agency and of the Bureau of the Budget. Congressman Bennett, himself a member of the sub-committee, undertook by figures obtained from the SEC to show that the securities exemption was used very little by Independent companies and that repeal therefore would not be harmful.

The National Association of Securities Dealers and the Investment Bankers Association both filed with the House committee statements in opposition to the bill, while the CIO and the AFL testified in support of it in the interest of protecting their members against fraudulent securities.

The Bennett Bill still hangs fire in the House Committee. We get the impression that Mr. Bennett intends to try to push it at the next session. . . .

FCC Hearings on Mergers

To make certain that an opportunity for hearing will be afforded by the Federal Communications Commission in merger and consolidation cases when the interests of the Independent industry are at stake, our association offered testimony last summer before a sub-committee of the Senate Committee on Interstate and Foreign Commerce. The subject of the hearing was S. 1456, introduced by Senator Magnuson (D., Wash.) at the request of the federal commission. The bill would make it entirely discretionary with the commission whether a hearing shall be held in cases involving the acquisition of one carrier by another.

The general objective of the bill is meritorious enough. It is that of saving the taxpayer's money by avoiding hearings in uncontested cases. Up to this time it has been this type of acquisition which has been involved in merger and consolidation proceedings. Our association interested itself in the legislation largely as an outgrowth of what happened in connection with the proposed purchase by the Southwestern Bell of an Independent property in Texas, the Tomball case referred to later in this report.

Left to right: K. W. Benckert of Muskegon, Mich.; Fred Knowlke of Washington, D. C.; Paul Henson and K. L. Lawson, both of Lincoln, Neb., and H. P. Siebken of Madison, Wis.

Our association asked the Senate committee to amend the bill in such a way as to make a hearing by the FCC mandatory if a protest is filed and a request for hearing made. We were able to arrive at an understanding with representatives of the commission respecting the form such an amendment should take and we believe the amendment will be acceptable to the Senate committee when it completes its consideration of this matter at the next session. . . .

Government-Owned Property

The value of a trade association like ours in seeking to protect the interests of its members again was pinpointed when Congress in its final days enacted Senate Bill 2630. This measure, sponsored by the Atomic Energy Comission, originally proposed without cost to turn over government-owned telephone facilities and other federal property at Richland, Wash., to the municipality, or some other political sub-division. The Independent telephone company serving the territory has at all times been willing and able to purchase the telephone facilities at a fair price and provide service to this community of 28,000 population.

We were naturally disturbed over the implications of congressional approval of public ownership of telephone facilities. We could visualize the meaning of having the camel's unwelcome nose under the respected tent of free enterprise in the telephone field.

Your association moved into action and succeeded in getting the bill amended in such a manner as to list commercial enterprise among the permissible transferees of the property in question and to include among the criteria guiding the administrative discretion of the Atomic Energy Commission the "pattern of ownership" of comparable utilities. Although in the state of Washington there is a substantial amount of publicly owned power facilities, there is no pattern whatever of public ownership of communication facilities.

During debate on the bill in the Senate, Republican Floor Leader Knowland read a letter which I had addressed to him pointing out certain possible interpretations of the legislation and drawing specific attention to the municipal ownership features. The resulting discussion had the effect of causing Senator Anderson of New Mexico, in charge of the bill as chairman of the Atomic Energy Committee, to make various remarks favorable to private telephone operations in Richland which we hope will be persuasive with the Atomic Energy Commission when it arrives at a decision as to the

proper disposition of the telephone property.

It is an interesting sidelight that according to a ruling of the Attorney General of Washington, a municipality in the state does not have the authority to engage in the telephone business. The validity of this ruling, however, is challenged by the city attorney of Richland who has said he would contest it in the courts and if necessary go to the legislature for the necessary power. Among other reasons, the city wants the telephone property in order to receive the benefit of its operating revenue for use in helping to run the general administrative machinery of the community.

Left to right: A. J. Stults of TELEPHONY; Katherine Bauer of Jefferson City, Mo.; S. F. Nixon of Westfield, N. Y., and Mayme Workman of Springfield, Ill.

Over-the-Counter Securities

Still another bill, upon which our association has taken no position but to which I feel I should draw attention, is one proposing to regulate securities traded over the counter. S. 2054, introduced by Senator Fulbright (D., Ark), is an outgrowth of the stock market investigation conducted at the last session by the Senate Banking and Currency Committee of which the bill's author is chairman.

Taking the form of a general amendment to the Securities Act of 1934, the bill among other things would require every company having more than 500 stockholders and more than 5 million dollars in assets to: (1) File financial statements and annual reports with the Securities and Exchange Commission; (2) comply with SEC proxy rules; (3) report to the SEC every month trading in the firm's stock by officers, directors and shareholders who have more than 10 per cent of the stock, and (4) make the stock subject to the Federal Reserve Board's margin requirements. It is understood that all of these requirements are now imposed on companies whose stock is listed on exchanges. The bill would also provide for exemption of securities from these requirements if it appears appropriate in the public interest or for the protection of investors.

While the securities of some of our companies are listed on national or other stock exchanges, the great body of them are traded in over-the-counter transactions. With the increase in the size and amount of assets of individual companies and in the number of their stockholders, the Fulbright bill if enacted would bring the securities of some Independent companies under SEC control.

Hearings last June on the Fulbright measure before a sub-committee headed by Senator Lehman (D., N. Y.) resulted in recommendations that 750 stockholders or 1 million dollars in bonds and debentures be one test to determine whether stock should be required to be registered. The sub-committee also recommended that firms with less than 2 million dollars in assets be exempt.

Action by the full Banking and Currency Committee will probably be sought by Senator Fulbright at the next session. . . .

Spurious Coins, Slugs

Hearings are expected at the next session on H. R. 7170, by Congressman Hyde (D., Md.), seeking to deal with the bad coin situation. The present law provides a penalty for making, issuing, or using spurious coins from one cent to five cents. They Hyde bill would extend the application of the law to 10, 25, and 50-cent pieces.

Automatic merchandising vending machines and telephone coin boxes have been popular places for the passing of slugs and bad coins. International boundary points and towns near race tracks are the principle but not exclusive places where these slugs and coins are found.

I have informed the congressman of the interest of our association in his bill and our desire to assist in promoting its passage. It should be recognized however that no legislation is any better than its administration and enforcement and that detection of violations is difficult.

Tax Situation

There are indications that Congress may decide to make some reduction in taxes next year. An election year is traditionally one in which this magnetic attraction to the voters is given consideration. It does not require great clairvoyance to suggest that tax reduction will depend in part at least upon the extent to which retrenchment in governmental expenditures can be accomplished.

When the 52 per cent corporate income tax rate was last year extended for another 12 months expiring Apr. 1 next, it was hoped that on that date it would revert to the previous level of 47 per cent. But corporations have no pulling power at the polls. It is generally assumed at the time this report is being written that the most that can be expected is a reduction of 2 percentage points to 50 per cent. With a Presidential contest at stake, the assumption is that personal income tax rates have the greatest chance of being pared.

While there is less current speculation about what will happen to excise taxes some hope is held out that they may share in any tax reduction program. Telephone companies will hope that the 10 per cent tax on telephone calls may find its way to oblivion. But there is no assurance of this. Telephone companies should embrace every opportunity to remind the public that this is an inequitable and discriminatory levy and that no similar tax is applied to other utility services such as water, gas, and electricity.

Tomball Acquisition

Among the purposes to which our association is dedicated is that of preserving the strength of the Independent telephone industry. One of the ways it undertakes to acquit this responsibility is by studying the property relationships between the Independent industry and the Bell System and by taking appropriate action when it appears that absorption by a Bell company of an Independent company is not in the public interest.

A case of this nature arose earlier this year when it appeared that the Southwestern Bell desired to purchase the Tomball (Tex.) Telephone Co., a property having 872 stations about 30 miles from Houston. The AT&T gave our association 30 days notice of the

(Please turn to page 112)

750 – Station Exemption Must be Preserved

By CLYDE McFARLIN
Chairman
USITA Employment Relations Committee

THE FIRST session of the 84th Congress had under consideration more important legislation affecting the Independent segment of the telephone industry than in any year since 1949. These proposals included amendments to the Fair Labor Standards Act which provided both for an increase in the minimum hourly rate of pay and repeal of the 750-station exchange exemption for operators, the repeal of the $300,000 exemption from registration under the Securities and Exchange Act, and the reimbursement of utilities for non-betterment expenses incurred by utilities for moving their facilities occasioned by highway construction. As you all know, the only one of these matters upon which legislation was enacted was the increasing of the minimum hourly rate under the Fair Labor Standards Act from 75 cents an hour to $1.00 an hour, effective Mar. 1, 1956.

With the opening of the second session of the 84th Congress in January, 1956, these three matters will all be under consideration again. While they are all of great importance, the one which imposes the greatest threat to the Independent telephone industry is the repeal of the exemption provided for operators in exchanges having less than 750 stations. This is illustrated by the fact that less than 1,000 of the 6,528 manual exchanges operated by Independent companies in 1955 do not have the benefit of the exemption. Or, stating the matter in another way, there are 5,553 Independent manual exchanges which have less than 750 telephones, of the total of 6,528 Independent manual exchanges in the United States.

It thus must be apparent to everyone that the matter of preserving this operator exemption is a *must* to our industry. Make no mistake in your thinking that we are not in danger of losing this exemption, because we are. Sen. Paul Douglas, who is chairman of the sub-committee of the Senate in charge of the study of this matter, has already announced that his committee will begin the study at the earliest possible moment after the reconvening of Congress for the purpose of broadening the coverage under the Act, both by repealing certain exemptions now provided for in the Statute, and the inclusion of workers not now covered.

Attempts have been made before to repeal this exemption and we narrowly escaped such action in 1949. It is the considered judgment of your Employment Relations Committee that we stand in very grave danger of losing this exemption at the next session of Congress. You must bear in mind that 1956 is a Presidential year. Therefore, determined efforts will be made to secure the votes of workers by passing legislation which may be regarded favorable to such workers and, of course, telephone companies do not vote.

Your association believes that the repeal of this exemption will make it impossible for a very large number of small companies to continue to operate. That as a secondary result, there will be a marked change in the ownership and character of a large part of the Independent telephone industry. Therefore, they have asked me to discuss this matter with you today, so that you may be informed as to the very present danger to over 5,000 small telephone exchanges having less than 750 stations.

I hope you will bear with me while I lay a little background for this discussion by discussing the history of the Fair Labor Standards Act. As you know, this act was enacted in 1938. The Independent telephone industry was assured that it would not be covered by the act. We were assured that telephone companies were exempt as "service establishments" under the provisions of the Sub-section 2 of Section 13 of the act.

Again, we were assured both by competent legal counsel and the proponents of the Act that because most small telephone companies had no toll lines used in interstate commerce and that because so small a portion of our income was derived from interstate commerce, that the rule of "de minimus" would apply. This is a rule of law meaning that because our percentage of interstate income was so very small that we would not be regarded as engaged in interstate commerce.

However, we were quickly disillusioned in our belief that we might rely upon these two propositions that would exempt us from the law. The Wage and Hour Administrator promptly held that Independent telephone companies, regardless of their size, were all under the provisions of the act.

It became apparent to our industry that over half of the Independent exchanges in the country would not be able to comply with the Wage and Hour provisions of the Act. The United States Independent Telephone Association, with the aid of various state associations, immediately mobilized their forces to secure relief.

A most intensive campaign of personal calls, telegrams and letters to the members of Congress, and to the administrator himself, was conducted to advise them of the seriousness of the situation. As a result of these efforts, the late Sen. Clyde Herring of Iowa, introduced an amendment in the United States Senate, exempting "any switchboard operators employed in a

public telephone exchange which has less than 500 stations."

Hearings were held, both in the House and Senate, upon this proposal. The effectiveness of the campaign conducted by our industry is evidenced by House Report No. 1448, 76th Congress, First Session, August 3, 1939, reading as follows:

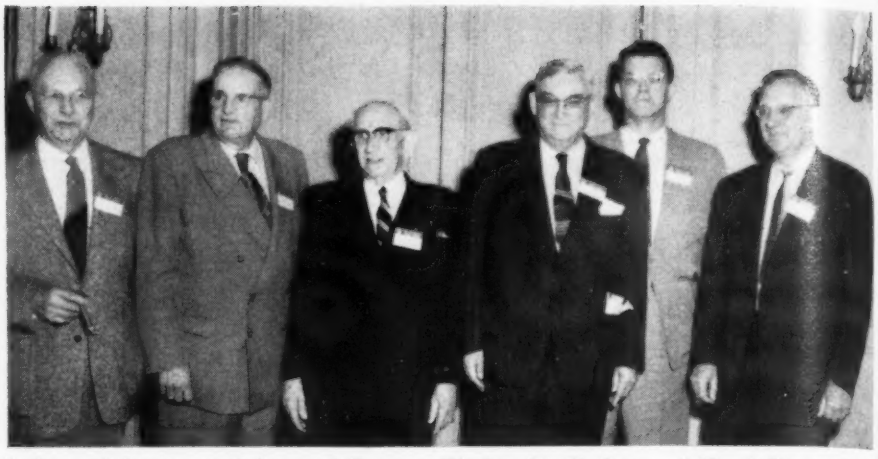
"The exemption for the operators of some small telephone exchanges is necessary to insure uninterrupted telephonic communication service for the farmer and for the small rural community. Small telephone companies, on the whole, are financially unable to comply with the wage provisions of the Act, and the sporadic character of the demand for services makes the application of the hours provisions of the Act impracticable."

I need not recall to you that this exemption applies to only switchboard operators. All other employes of telephone companies, excepting executives and administrators, are covered by the provisions of the act. Again, as you know, the act was amended in 1949 to increase the minimum hourly rate to 75 cents, and the operator exemption was amended so that the number of stations required was increased from less than 500 to less than 750.

As I have said before, the House of Representatives adopted an amendment which would repeal this exemption and the bill as it reached the Senate floor also provided for a repeal of this exemption. Thanks to some very hard work by members of our industry, the Senate was informed of the continued need for this exemption.

Special credit is due to the late Senators Robert Taft and Hugh Butler in not only preserving our exemption but increasing the number of stations. It is a great tribute to the integrity, judgment, knowledge and ability of the late Senator Taft that when he arose on the floor of the Senate to speak on the matter of this exemption and stated that the exemption was a necessity to the telephone industry, and that an increase in the number of stations to 750 from 500, only reflected the natural growth in the industry and would exempt no more exchanges than were exempt under the original provision, that even though he was a member of the minority, that the majority acceded to his request and accepted his amendment without opposition and without a record vote.

In January, 1955, President Eisenhower, in his state of the union address, recommended to Congress that the minimum wage be increased to 90 cents an hour, and that coverage under the law be broadened. Almost immediately a flood of bills seeking to increase the minimum rate from 90 cents to $1.50 an hour were introduced into Congress.



Left to right: L. A. Gritten of Everett, Wash.; W. H. Dean of Hood River, Ore.; R. B. Still of Bloomington, Ill.; D. O. Hood of Medford, Ore.; R. A. Neilson of Hood River, Ore., and F. S. Barnes of Rock Hill, S. C.

A considerable number of these bills provided for the repeal of our exemption. Bills seeking to accomplish these two purposes continued to be introduced into Congress until almost the closing days of the session so that there were approximately 50 bills introduced at this session of Congress seeking to amend the Fair Labor Standards Act.

A sub-committee from the Senate Committee on Labor and Public Welfare, of which sub-committee Sen. Paul Douglas was chairman, commenced hearings early in April, and these hearings continued until late in May. Your speaker as chairman of the Employment Relations Committee of your association, accompanied by Vice President Bailey, Secretary Richert, and S. A. Lane from the committee, appeared in behalf of your association the first week in May opposing any increase and also the repeal of our exemption.

We received a most courteous hearing and while witnesses were limited to 10 minutes in their testimony, Senator Douglas, on his own motion, extended the time of our hearing to over 30 minutes. It was evident from this hearing that the senator was committed to support an increase in the minimum rate to $1.00 or more an hour, and that he felt that our exemption should be either repealed or modified by making the basis of the exemption the company rather than the exchange. I would like to talk more about this later.

The full House Committee on Labor commenced hearings late in May and continued said hearings until about July 4. The hearings in the House Committee were limited to a proposed increase in the minimum hourly rate and no testimony was permitted on matters involving the repeal of the exemption and broading of the coverage. Your chairman, again accompanied by the same representatives of your association, appeared before the House Committee late in June and again received a most courteous and friendly reception.

During the Senate hearings there was such widespread opposition to any attempts to broaden the coverage of the act or to repeal exemptions, that the proponents of an increase in the minimum hourly rate became alarmed that such opposition would prevent their securing the passage of any legislation at the first session of the 84th Congress.

Early in June it became apparent that the backers of an increase in the minimum rate were willing to give up attempts to broaden the coverage and repeal the exemption if they could be assured of an increase in the minimum hourly rate to $1.00.

It was apparent there was a "meeting of the minds" as we lawyers say, and on June 8, 1955, which was the next calendar day after the report of the Committee on Labor and Public Welfare was submitted to the Senate, the Senate by a voice vote, almost without debate, and after only an hour or two of consideration, passed an amendment increasing the minimum rate to $1.00 an hour.

The House, in the closing days of the session, also passed this amendment so that the new law becomes effective on Mar. 1, 1956. This, of course, will have a very serious economic effect on our industry. Many companies will not be able to get the necessary rate increases from their utility commissions by Mar. 1, 1956, and will have to absorb this added cost until they can get new rates put into effect. It will mean an increased cost to telephone users and many companies anticipate a considerable loss in subscribers.

However serious the effects of this amendment may be upon our industry, the greatest threat still awaits us. As I said before, as soon as Congress convenes you may look for hearings to be begun on provisions providing for the repeal of our and other exemptions provided for under the statute. With the consolidation of two of the largest labor organizations in the country, the political power of this organization will be materially increased.

In an election year, members of Congress are going to find it difficult to resist demands from such well-organized forces, for the repeal of the exemption under the act. Indeed, the demands have been enlarged not only to include a broadening of the coverage and repeal of the exemptions but to increase the minimum hourly rate to $1.25 an hour.

Your association office in Washington, D. C., did a most efficient job in keeping our industry informed of the progress in the wage and hour legislation at the last session of Congress. Your association also asks your aid in opposing this legislation.

The response from the field was most encouraging. In response to requests from your association you wrote hundreds of letters and telegrams to your members of Congress, and many state associations sent personal representatives to Washington to call on their representatives and senators.

In spite of this splendid effort, because of economic conditions resulting from inflationary pressures and certain other causes which I shall not discuss, our efforts came to naught. I need not tell you that small manual exchanges cannot comply with the wage and hour provision of the law as they would be obligated to do if the exemption were repealed. It seems to me there are about four alternatives:

The first alternative to be considered is conversion to dial.

Secondly, the company could sell out.

Thirdly, they could curtail service.

Last, but not least, they could go into bankruptcy.

As you well know, if these 5,000 exchanges desired to convert to dial, and assuming they had sufficient funds available to do so, it would require several years to rebuild their plants and to manufacture the necessary equipment. Therefore, we must make every effort to preserve our present exemption until these conversions can be made in an orderly fashion. We must preserve our exemption in order to buy the necessary time to convert these exchanges from manual to automatic operation.

This will require not only the utmost efforts of our association but the highest degree of cooperation and help from all of us who are engaged in the Independent telephone industry. Even though you may have converted your exchange, or exchanges, to dial and are not affected by the proposed change in the law, you owe a duty to your brother to assist him in this hour of need.

Our executive vice president, Clyde Bailey, on Aug. 24, 1955, outlined a most effective plan of campaign to do the job of preserving our exemption.

He proposed that every state association immediately appoint a special committee of three, five, seven, or more members, to take charge of this matter in the various states. These committees would be charged with the following duties and responsibilities:

(1) Develop facts and arguments showing the justice and the merit of and the need for retaining our 750-station exchange exemption.

(2) Contact personally both of your senators and all of your representatives and make certain every one understands the problem involved.

(3) Acquaint individual companies with the need for cooperative action by them in furnishing information, writing letters to their congressional delegation, and putting their shoulder to the wheel in other ways that may be helpful.

(4) Cooperate with the USITA officers and Employment Relations Committee.

As chairman of your Employment Relations Committee, I feel this suggestion of Vice President Bailey is a *must*. To date the response has been somewhat disappointing. I regard it as of the utmost importance that this plan be implemented immediately.

Most of your senators and representatives are now at home and will be there until near the opening of the new Congress. A personal call from you to them while they are at home would be most effective, certainly much more effective than if you wait until they return to Washington and then write them a letter. While they are home you will find them relaxed and they have time to discuss this proposition with you. They will be relieved from the thousand and one pressures which they, of course, have while at Washington.

You will find that you will be warmly welcomed if you call on them while they are home. They are anxious to know how the people in their districts and states are thinking and what are their wishes in connection with matters of legislation. I hope you will not think I am an alarmist as I again say to you that this can be a life and death matter to hundreds of the over 5,000 manual exchanges now exempt from the wage and hour law.

I have already spoken about the suggestion of Senator Douglas that our exemption be placed upon a company basis rather than an exchange basis.

Left to right: H. D. Fargo Jr. of TELEPHONY, and Mr. and Mrs. Francis X. Welch of Washington, D. C.

The present exemption was adopted by Congress as the result of a questionnaire submitted to the regulatory bodies of the various states. The regulatory bodies overwhelmingly endorsed the station basis as a proper one for an exemption.

Vice President Bailey, in a memorandum prepared during the consideration of this matter by Congress last spring, gave 10 reasons why a company basis should not be employed in affording needed protection to small Independent companies and why existing station exchange basis should continue. Time does not permit me to give you all these reasons but I should like to summarize briefly.

The first and most important one is that putting the exemption on the company basis is entirely bereft of logic. Two, Congress has twice endorsed the present basis of exemption, first in its enactment in 1939 and again in 1949. Again, it would result in some weird results in neighboring

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Philosophy and Mechanics of

Telephone Merchandising

By B. T. MILLER
Vice President
American Telephone & Telegraph Co.

IT IS A great honor to be given a place in your convention program and I appreciate it. But I am not so bold as to think you asked me this time because I held you spellbound when I was here a few years ago. Rather, I am sure this invitation again evidences your understanding that your companies and ours are engaged in a common endeavor, and that the best in telephone service for the whole country depends on our successful working together.

Certainly that is the way we feel about it in the Bell System. With you we share the responsibility for service to business, to people in their homes all over the nation, and to government including the military services. And I'd just like to say this about the relationship between ourselves and all of you who are members of the United States Independent Telephone Association. We are mighty glad it is you folks we are working with. We hope our own part in this joint effort will always justify your feeling the same way about us. One of the great satisfactions of telephone work is in the personal associations we form and the staunch friends we make. May it ever be thus. I am confident it will.

All of us in the telephone industry have the further advantage of being extremely busy people. In that respect I see no likelihood of any change for years to come. We are here, of course, to look ahead, and I want to do that with you, but first let's consider very briefly where we have come from in these postwar years and where we are today.

Telephones in service have doubled—from less than 28 million at the end of 1954 to nearly 56 million today. Lately we have been moving so fast that the 50-millionth telephone, which we joined together to celebrate less than two years ago, already seems a long way back.

In these same 10 years the number of our share-owners has likewise doubled — and must now total more than 1½ million people. Investment in the industry has increased by 10 billion dollars or more, and today there are 280,000 more people working to provide telephone service than a decade ago. Think of it. The vitality of this business is such that just since the war we have created 250,000 new jobs in the operating telephone companies alone.

To accomplish the enormous postwar expansion of telephone service, in a time of steeply rising prices, we have had to increase our rates. But, because we have not been able to get rates up fast enough we have had to plan cautiously; we did not have what you could call really clear sailing. We haven't been able to run before the wind. We have had to tack all the way.

Notwithstanding this, we have done a tremendous amount to improve service as well as to increase it. We have given the job the old college try all the way. The comment I am making here is simply that if the financial picture had been more favorable—then it stands to reason that the record of accomplishment to date would have been even greater.

As it is, we are still pushing to cut off those persistent tail ends of unfilled orders and unfilled regrades. A year ago in the Bell System we thought we could chop them off for good by the end of 1955. But even if that doesn't quite come to pass, we are determined to get abreast and ahead of demand just as quickly as we possibly can.

We are also sure of this: Along with the final drive to catch up on all orders, we have ever so many opportunities right now to provide more complete service to millions of telephone users. Even if every gate isn't wide open in every place, there are certainly enough doors ajar to give great scope to our talents and efforts. New opportunities are at hand all over the map and we have new means for meeting them—new equipments, new systems, new services. We are blessed not with one but with many proving grounds where we can test out our abilities. Instead of passively looking forward to the time when we can fully merchandise our product, we can be actively working toward it today.

With that idea in mind we have lately organized a Merchandising Department in the AT&T company staff, and the operating companies of the Bell System have similarly been assigning specific merchandising responsibilities in their organizations. How we look at this merchandising function, and how we believe it will help us do a better job in the future, is what I want to talk about today.

Many people instinctively associate the word "merchandising" with selling and let it go at that. They think that if selling is plain turkey, then merchandising is turkey with all the fixings —the gravy, the giblets and the cranberry sauce. In this view, merchandising wraps up selling, advertising, and promotion in one pretty package with a big red ribbon.

Now, I don't think that is a full-sized picture of merchandising at all. That's just one corner of it. If you will look in the dictionary, you will see that "to merchandise" means "to make merchandise of." Merchandise is goods, or in our business, services. Hence merchandising to me means getting the goods and services ready as well as selling them. It is buying

and selling — the whole process — not just the last part of it. It is making sure you have the right things to sell before you try to sell them. And that means, of course, learning people's needs and wants; finding out what are the salable goods and services that Mr. & Mrs. Public would most like to have. We cannot sell unless we know what people will buy.

So, let's say first that one of the essentials of good merchandising is to study the market—to probe, explore, test and learn what the market is and may be, not only at short range but also at long range. We want to know—we've got to know — what services people want of us and in what fashion they wish us to provide them; what styles they prefer, what colors they like, how much they want and when they want it. We need this knowledge all the more at a time like the present, when we have acquired the skill to provide such a tremendous variety of services. The question is, how do we discover those that offer the best combination for meeting customer wants and producing good financial results?

Going right along with market research, and indispensable to it, is continuous study of economic conditions. Bear in mind, I haven't come to the selling side of merchandising yet. This is all on the buying side. After we determine what the customers' wants are, we still have to estimate how much of it will be wanted, and, fully as important, when, so that we can put it promptly and efficiently at their disposal. We've got to figure requirements and place orders in advance. We've got to make sure that all needed equipment, but not too much, will be delivered to the proper places at the proper time. The three musketeers of this estimating process are the market researcher, the economist-statistician, and the engineer. They are all merchandisers, every one of them, no matter what their titles.

Furthermore, I want to tell you that their combined efforts are throwing real light on the path which we in the Bell System are trying to mark out ahead. We have been working hard to develop long-range estimates as a guide to planning production.

How large is our market likely to be if we stimulate it a lot—if we stimulate it a little—if we do not stimulate if at all — or if unforeseen events should cut it away below what now seems the most reasonable probability?

What will be the impact of each of these potential situations on our needs for new telephone plant?

What manufacturing capacity should be obtained—and when?

How will sales effort in one direction influence revenues, investment and earnings, as compared with effort in another direction?

Left to right: G. L. Best and R. P. Judy, both of New York City; R. A. Lumpkin of Mattoon, Ill.; L. W. Hill of Tarboro, N. C., and B. T. Miller of New York City.

What service objectives will not only produce the most in customer satisfaction, but along with that, will yield the best earnings and thereby open up the most in additional future opportunities for service?

Our long-range studies are aimed to help answer these and similar questions. They are opening our eyes to much that we could hardly get at otherwise. I assure you we are going to keep making them regularly, and if there are any among you who have been considering the same sort of thing, but haven't quite come to it, all I can say is that I commend it to you heartily.

Now, what is the key thought in everything I have said so far? One word describes it, and that word is—planning.

We study the market to plan what to sell, and where, and when. We plan our product to satisfy our customers' wants completely. We plan our production to get the product on our shelf, ready for use when the customer wants to buy.

Left to right: J. R. Fox of Waldron, Mich.; R. C. Reno, editor of TELEPHONY, and Otto E. Koecher of San Antonio, Tex.

And, along with this, we are doing some other planning too. We're planning how to get the product off the shelf just as fast as we can. Ask any smart retailer the first principle of good merchandising. He will tell you it's turnover; the more the merrier and the faster the better. He's running a store, not a safe deposit vault. Sure he has to have a warehouse, but that's just a way station for goods in transit. He needs the goods but the last thing in the world he wants is to hang on to them. He wants to get rid of them, to turn them into money, at a profit and quickly. There's no money in inventory stock, and no one can make use of it either.

Our situation in the telephone business is no different. We have to turn facilities into revenue, and like the retailer we want to do this as fast as we can. Idle plant doesn't earn anything. Neither is it providing service to anyone. While we are planning to get the plant into being, therefore, we must also be planning to get it into use. If we are good merchandisers, while we organize and time the steps in buying, producing and constructing facilities, we are also planning and timing all the coordinate steps in advertising, promotion and selling.

This is that second half of merchandising, if I may call it that, which so many people wrongly think is the whole of it. But, in saying that, I certainly don't mean it is unimportant. Far from it. When we get this side of the job in the right perspective, then I think we can appreciate better than ever how important it is. We can also better understand the need for good planning in this area to fit in with

every other step in the merchandising process.

If we just stop to think of it, our particular business lends itself remarkably well to planned promotional effort. We are very, very fortunate. We have a continuing daily relationship with telephone users of a sort that many other businesses don't enjoy, at least to the same degree. We operate and maintain service for our customers, not part of the time but all the time. When they want service moved they come to us. When they have any difficulty of any kind they come to us. When we are planning any change in their service they expect us to come to them. Every working day is simply loaded with opportunities for us to discover, propose and provide the kind and amount of telephone service that will most completely satisfy their business and household convenience.

These natural occasions are among the very best we have for using what I will term the direct service approach. Notice that I didn't say the direct sales approach. Call it sales if you prefer, but I put it the other way because what we are really after is to see that folks get the service that is the best possible for them; a service that is complete and handy, leaves no room for minor dissatisfactions, and has the user's entire and happy acceptance. Always, it seems to me, every telephone person who is selling a customer anything, from a spring cord to a dial PBX, must keep right in the front of his mind that the customer deserves and is going to get nothing less than the very best we can give him.

We are fortunate in another way, too. Almost always we have two chances to make sure our customers get the best we can provide. We have two chances to help, not one. If the service representative doesn't succeed, the installer has his chance. With the aid of samples, too. And let me ask you this. What other business do you know whose customers come gladly to their door to welcome their representatives —invite them in with smiles—and are in a receptive mood? With our representatives, they are anxious to see all the things that can be provided to make their service truly better, more complete and more attractive than they had ever dreamed it could be.

I'm not painting this picture out of sheer enthusiasm, though I freely confess to that, too. We are just beginning in the Bell System to appreciate how folks respond when we really show them our wares. But I could document these beginnings with story after story of households that have started by asking for one black telephone and ended happily with three to five instruments in color, each fitted with spring cords and located for genuine convenience, with or without various key arrangements as the case might be.

Have we a market? Yes—and it's fabulous.

There are 47 million households in these United States. About 33 million of them now have telephone service. The remaining 14 million do not.

However, those 14 million are only a part of our residence market.

In the 33 million homes and apartments that already have service there are 80 million bedrooms, 33 million kitchens and 33 million living rooms. There are countless dens, libraries, studies and playrooms; basement, attic and garage workrooms; porches, terraces and patios. Taken all together, they add up to an immense number of potential locations for additional telephones.

Three million farms have only one telephone. Most farms are small businesses, many of them are really large enterprises. I fully appreciate everything we have done to bring telephone service to the farms of America. I know they have always had more service than the farms of other countries, and that, today, they are more widely served than ever before. But the fact remains: Most of them have only one telephone to meet all their needs, and multi-party service at that. I think we shall do well to conceive of farm service in terms of farm telephone systems—systems that will completely serve house and barns, machine shed, milk house and outdoor locations in the fields, and that will reach the central office on its individual line. And, going back to the merchandising principle, the way to determine this market and how to meet it is first to study it and find out what the full possibilities are. We are now experimenting in this field in Iowa and in Texas.

You may well ask, "If a farm system is desirable, why not systems for non-farm homes as well?" We are asking ourselves the same question and are working for the answer. As a matter of fact, I can make a good argument for always thinking in terms of systems wherever we provide service. Don't forget that other people are selling systems more and more and as consumers we are all getting used to it. Thousands and thousands of people have so-called "hi-fi" music systems in their homes now where they used to have just a plain old phonograph. Their radios are systems that sound the morning alarm, turn on sweet music and start the coffee. Their new automobiles have complete power systems that help to steer the car, put on the brakes, raise and lower the windows, as well as make the wheels go around. And, picture the young housewife as she moves into her new home. Her kitchen is a functional unit, a real system if ever there was one, and getting more so all the time. It will heat the water, wash and dry the dishes, do the laundry, freeze her food, cook it, and turn itself on and off while she is out of the house.

We, of all people, who have been operating telephone systems for three quarters of a century, ought to be out in front in applying the system idea. For $10 a month or so in most places we can provide a complete home system serving kitchen, bedroom, living room, and including voice communication from any telephone in the house to a caller outside the front door. How much of a market will it have? I'll wait for the market researcher to tell me more definitely, for I don't want to violate any of these merchandising principles I've been talking about; but until then I don't mind going out on a non-merchandising limb and guessing that from six to 10 million families would snap it up.

Incidentally, just to support my thought about providing systems, our experience to date with so-called "package" selling has been extremely encouraging. That is, where we have offered customers a complete telephone service package to fit their needs, for a total charge of so much a month, instead of offering first a main telephone, and then additional items at so much each — with the total charge added up later—we have been getting a wonderful response. And, remember, this kind of selling experience in itself is an important part of market research.

But, coming back to my main theme, if we are going to realize our opportunities fully we have great need to plan. Ten million new homes have been built in this country since the war. They all have plenty of outlets for electrical appliances and systems. How many have outlets for telephones and telephone systems? In 1955 new homes have been going up at the rate of 1.4 million a year and the prospect is that we shall keep on building a million or more a year for a long time to come. How many of those that are still to be built will be suitably equipped for installation of telephones in each room or in each main area of activity? If we will really get down to cases in our merchandising effort, I'll bet that far more of the next 10 million homes will be primed and waiting for the

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Your Date With Destiny

By C. HAMILTON MOSES
Chairman of the Board
Arkansas Power & Light Co.
Little Rock, Ark.

THIS is a fine forum—none greater in America. You are a great group—tops anywhere on earth. You represent this modern miracle we so proudly call American business—the free enterprise system — our way of life. You have so much to be thankful for—so many to be responsible to.

I wish I had the ability to sell you on yourselves — your influence, your great power—and, in the Lord's own good day—your eventual glory. So as I humbly and haltingly appear here today—as much as any one group in this nation—I feel I stand in the presence of the future destiny of our country. If there was ever a time in all the centuries when any nation had a date with destiny—that's America today. Herein lies your appointment with opportunity.

You have lived through 20 trying and tremendous years. You still face troubled and troubling times. You witnessed this country's deepest depression and its greatest war. You are now in the middle of another war—whether hot or cold—and despite all the truce treaties. You led in charting our nation from the depths of economic distress to produce the greatest prosperity the world has ever known. You led our people to soar to the very heights of wealth and power and world prestige. You, in America today, stand on history's highest pinnacle—and view with varying emotions the impending centuries.

America—Unlimited

You have seen charted the story of this country's tremendous prospects for the next 25 years—just a quarter of a century—just around the corner. Here is pinpointed history's most astounding economic romance. It portends still more years of our expanding cycle of better business.

Our population is increasing three million per year—upwards of 40 per cent in that quarter-century. Four million babies are being born each year—11,000 every day. Every month there is added to our population another Birmingham—and every 10 days another Little Rock, the capital of my state. More people mean more prosperity.

Within that same quarter-century, America will build 23 million new homes—a fifth plate will be added at the table of every American family. Twenty-five million people in America never saw a circus. We are living in the presence of a passing parade. Here is an ever-beckoning stream of better business.

You have seen the picture of the coming 25-year labor increase—from 62 million to 86 million gainfully employed. Then, don't forget the ever higher wages and ever better living conditions, and the ever-increasing wants and desires. What a spending spectacle!

During this same quarter-century, our over-all national income will increase from 300 billion dollars to 600 billion dollars. Many estimate that our national income in 1978 will equal three-quarters of a trillion dollars—a figure no human mind can conceive and only the composite pocketbook of America can pay.

Then, even that's not all. The expansion of technological research into a predictably productive process calls for the lifting of our sights above these projections that are based merely on the trends of the past. We are in the middle of a technological revolution that is highly capable of causing a sharp and substantial break upward from the progress recorded heretofore. We have incubating in our laboratories a host of new industries and a long list of new ways of producing more cheaply so that our markets can't help but be widened and intensified. The truly great phase of our technological revolution lies ahead of us.

Truly ours is an America unlimited—opportunity unconfined. What a challenge to the patriotism and the ingenuity of American business—and that is you. Herein lies my story. Out of all this comes the challenge of the centuries.

Challenge of the Centuries

Our nation's life is not all sunshine. The future is not all a bed of roses. During the past 20 years our people have gradually surrendered their personal liberties for various personal doles. Our states have seen their sacred sovereignty silently settle in Washington in exchange for various types of political pottage.

We were told these rights were being surrendered in the interest of national defense and, when the war was over, these rights would be restored. Yet, some 10 years have passed and not a single right has been returned, and this great nation — these marvelous people — still face scattered controls and require various government subsidies. We do not yet know whether our unprecedented American economy can stand on its own feet.

We are told that America's greatest weakness is our people's unbelief in their own institutions and the growing fear of their own government. In our state we saw a chain of 50 banks close one Monday morning. This tragedy resulted in receivership for our three largest insurance companies, self-styled "the invincible pyramid." This need not have happened—except our people lost faith in these institutions and in those who directed their destiny.

Why was American business so long

in the dog house? Why did it take the long arm of the federal government and the power of the Congress to force us utilities to clean up our own business? Why has it taken us so many years to serve ourselves back into the confidence of the people?

Why has government in business—in competition with its own citizens—been continuously on the increase? Is it for the public good—and if not—why can't you so sell the people?

Why did the government see fit to become the biggest insurance company in the world? Why do our insurance companies face the constant suggestion of federal supervision—and eventual government domination?

Why has your government become the greatest holding company in the world—with assets equalling those of the nation's 30 largest corporations?

Why was it necessary for the government to insure the deposits of the banks? What would happen to the banks of the country if the government guaranty of deposits was to be eliminated? How many millions of dollars today is kept in cash, at home and in deposit boxes, because of the lack of confidence in banking institutions and the sure belief that many of the banks will again go broke?

Just as a little food for thought, recall that: Today our government is, among other things, the largest single electric power producer in the country, the largest insurer, the largest lender, the largest landlord, the largest tenant, the largest holder of grazing land and of timberland, the largest owner of grain, the largest warehouse operator, the largest shipowner, the largest truck fleet operator.

Government competition is reported by airlines, bakeries, cemeteries, coffee roasters, dry cleaners, freight forwarders, motor vehicle repairers, ship builders, ship operators, retail grocers, rope manufacturers, tire retreaders, truckers, tugboat operators, warehouse operators, wooden box manufacturers, and many others.

Humanity's Greatest Battle

We bring to you the challenge of this century's greatest citizenship task. America right today faces a period of reappraisal and rededication—and maybe some far-reaching readjustments. We come right back to your doorsteps — to so-called Big Business — to the leadership of our country. There has never been a time when our people were so anxiously crying for leadership—and again I say that is you. Millions are wondering how we got in our present mess.

This country was founded on the dignity of the individual and faith in ourselves and faith in our institutions and faith in God. We have got to start back to the breakfast-table devotions and to the family fireside virtues. This country is desperately listening for the voice of history—the voice that has not spoken.

Left to right: Hugh Pulliam and Gordon Saunders, both of Sumter, S. C.; J. F. Van de Vusse of Bloomington, Ill.; and R. S. Griffin of Sherman, Tex.

There was a golden voice from a throat of silver that spoke ofttimes to our people, and millions followed blindly and in deep faith. Many today feel that voice led them astray—away from the ancient landmarks of their fathers. Apparently there are new trends and changing concepts loose in the air.

Somehow, I believe that out of all this conflict and above all this babble and confusion we will again hear the voice of destiny. It now rumbles in the distance, bringing the story of a militant democracy marching on. You will know that voice—Washington will heed that voice. It was that newborn and prattling voice that inspired George Washington at Valley Forge and led those embattled farmers on Concord Bridge to fire that shot heard 'round the world.

It was the voice that told Hirohito to get off his white horse, and the first voice that he ever obeyed. That voice so scared Hitler that he died like a rat in a cellar. It is a great and honest voice. When our boys were in the Belgian Bulge, it whispered ever so faintly —"I'm scared—God be with me." That was a humble voice. Later it yelled forth—"Victory—Thy Will Be Done."

That voice has spoken to you many times during the past few years. It cried "More War Bonds—More Production"—and you answered, "Sure, here they are." That was the voice of courage. That voice is pleading today, but Washington will not hear. That voice appears faint now, but it will get louder —it always has. It is not the voice of a brass hat, nor of a swivel-chair bureaucrat — nor of labor — nor of management — nor of the farmer — nor of the lawyer—nor of the storekeeper—but it's the simple, humble, honest voice of them all. It's the voice of America, calling you from your lethargy — your complacency. It's asking you to measure your own patriotism — to put your own price-tag on your own citizenship. It's the composite faith and hope and courage of 160 million people.

Your boys and girls heard that voice. When Uncle Sam called they unanimously answered the call and gloriously did they do the job. Now that same greatest character in history — Uncle Sam—is just as surely calling to you. If you would but listen, you could almost hear the call: "Come here, Jimmie's papa. Come here, Dickie's daddy. YOU are the answer—yes—the only answer to all my troubles. You have never failed in times of crisis. It is here again. My date with destiny is your appointment with opportunity."

This is no attempt at oratory, it is a simple statement of fact—selling you on yourselves—making you realize your own responsibility. Yes, our people are literally crying for a dedicated leadership. There has never been anything wrong with the followship of America. This matter of inspiring leadership, of building a people's morale, is too intangible to measure in terms of capital accounts. It is not found in the balance-sheet. It is something you can't buy. You cannot hire it done—you cannot send an assistant. You must dedicate your own self. It is your own personal task.

While business has never faced a

greater challenge, it has never had a greater opportunity — nor a more inescapable responsibility. We need desperately a rededication of personal lives. We need no pride of personal accomplishment—no self-exaltation. We need no pessimistic outlook. American business will be realistic—yes—but will never sell its country short.

Everything you hold dear is in the balance. There are loose in this country two conflicting theories of life and of living. They are at each other's throats. Both cannot survive. In your day's time, it is history's most decisive battle for the hearts and minds and loyalties of men.

America's danger comes from within and not from without. You have the best trained sales force on earth. They can sell any product—why can't they sell your own system of business? You must first sell yourself—get right at heart—and then you must sell them. They must be set on fire. It can be done. This is the challenge I bring you today.

What One Little Company Can Do —The Power of The People

Let me tell you the story of one little power company.

On the basis of the statistics by which we measure the economy of the people, Arkansas has long been low in the scale—at the very bottom—save and except for our sister state of Mississippi. We wondered what one little company could do to sell the people on the fact that private industry could build a better prosperity than any federal authority.

You must study a map of our state to comprehend its development potentials. No other state in the nation has been blessed with such geography. In your mind's eye, start yonder in the northwest section of Arkansas—right in the heart of the Ozarks, the highest mountain range between the Alleghenies and the Rockies. There you find everything the mountains afford with all of its beautiful scenery and glorious mountain climate. Then you come off those mountains onto the hills—and then onto the plateaus—and then across the prairies and on down to the great Mississippi Delta. In this one state you find every type of soil and of climate and of people and of attitude and of raw resources you will find anywhere in America.

Arkansas Community Building Plan

So our leadership — representing every segment of our society — organized and went to work. Our business folks got right at heart. We wanted some program to take to every community in our state, to help them do their own job. There was no such program. This intangible something we had so long praised as private enterprise had not had sufficient interest in their local communities to build a plan whereby people could collectively build themselves. So, our Economic Council had to build its own program —known as "Build Your Own Home Town." It is now called "The Arkansas Plan," and it has won national recognition.

Our business leadership went to every community in Arkanas. A thousand different times did we call the leadership together to discuss their common problems. Two hundred fifty different towns built their own programs — drew their own blueprints — fixed their own goals—and have gone to work. Twenty thousand community-building projects were put on the workboards—10,000 were accomplished. New projects are being born every day. The results are nothing less than astonishing. Here is a people on the march.

Our boys drew up a Rural Development Program. This program was sponsored by the Arkansas Press Association, the Arkansas Power & Light Co., and the University of Arkansas Extension Service. Three hundred different rural communities are already organized and at work. Our boys tell me that within a period of five years, we will have more than 800 rural communities — all organized — with fixed goals and blueprints for the future and at work — building better communities for the families' future.

Charles Schwab is reputed to have said, "Give me 10 men—and let me pick the men—and I will build a city in the heart of the Sahara Desert." Roger Babson said that less than 3 per cent of our adults ever make any contribution to building a better community. In our little state of Arkansas, we today have more than 100,000 adult citizens actively engaged in their own community-building activities. This is democracy in action.

Contests Arouse Activities

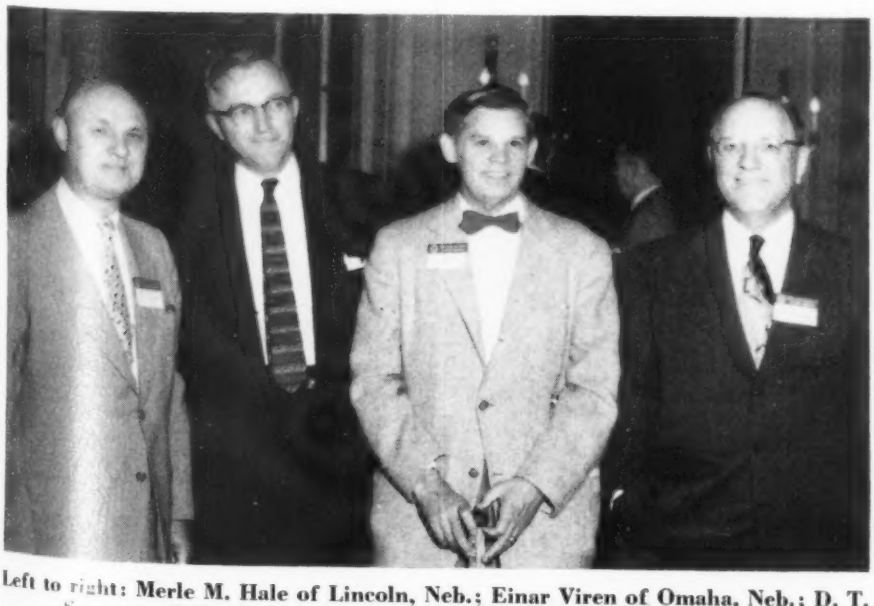
Our company offered several thousand dollars in prizes for contests in both divisions—the towns and the rural areas. Some 150 towns and 140 rural communities entered the two contests, each vying with the others as to which could build a better way of life and living. When the contests are over, our company calls an annual meeting for each group in Little Rock for the awarding of the prizes. These meetings last one and two days. We provide the best talent we can find in the nation to show this leadership—both urban and rural groups—how they can do a better job of building better communities and bigger business and more prosperity, always with particular emphasis on social, educational, cultural and spiritual values.

I wish you men could attend one of these meetings. These folks are being somebody. They are translating themselves out into their community—building personal pride and inspiring the zest and hope so desperately needed in our country today.

Lights to Farm Houses

Then, in the matter of rural electrification. Would you believe that our little company, per its size—number of customers and investment in property — has carried lights to more farm houses than any private utility in America? Our boys suggested, "You have forgotten the cost formula." You executives know that business does almost everything by formula, by figures,

(Please turn to page 117)



Left to right: Merle M. Hale of Lincoln, Neb.; Einar Viren of Omaha, Neb.; D. T. Swanson of Charlottesville, Va., and W. F. Roberts of Lincoln, Neb.

Report of USITA Plant Committee

By H. P. SIEBKEN
Chairman

IN LINE with the decision of the (USITA) board of directors, the Plant Committee was reduced from last year's 11 members to six. At a meeting of the committee held in Chicago last May, the members accepted the directorships of sub-committees as follows:

Cable and Safety—W. M. Driggs of Chicago, Ill.

Central Office and Station Equipment —G. W. Miller of Rochester, N. Y.

Pole Lines, Conduit, and Wire Plant —G. P. Barney, Lincoln, Neb.

Transmission Testing, Inductive Interference, and New Techniques and Equipment—B. C. Burden of Lincoln, Neb.

Toll Dialing and Radio—Frank S. Barnes Jr., Rock Hill, S. C.

We are all very fortunate, and particularly myself, to have such experienced, well-versed, and cooperative plant men accepting these responsibilities. At this time, I would like to thank these men for their willingness and help in making this committee an active organization to further plant operations and practices of the Independent segment of the telephone industry. I would furthermore like to express my appreciation to the companies that have made this possible. I am sure the association officers join me in thanking these men and their companies.

To help the sub-committee directors, members for the five sub-committees were selected during our May meeting, and the acceptances by these men from both small and large Independent companies to serve on the various committees was very gratifying to the five directors and myself. Our thanks to these gentlemen for giving of their time, knowledge, and assistance in the preparation of reports and papers of the various sub-committees.

At the spring Plant Committee meeting, it was suggested that each sub-committee prepare a report for this conference covering new methods, materials, and any other suggestions regarding their phase of telephone plant. Such reports were submitted and through our Washington office were reproduced and are available. We did not contemplate having each director present his report at this conference, because this year the plant conference was reduced to a half-day session.

You will find a report by Bill Miller on "That New Look of Telephones," describing the use of the new colored telephones. George Barney has prepared a very interesting report on "Observation on Plant Techniques and Materials," covering at least eight or nine suggestions. Included are such items as rural distribution cable, dead-ending open wires, pre-spun cable, strand mounted terminals, and joint construction for voltages higher than usually considered standard. Bernie Burden, has given us "Field Use of New Developments." Parts of this paper will be presented to this conference.

As has been stated in previous meetings, the Plant Committee, to its best ability, will try to answer any questions or problems called to its attention. Any request can be addressed to the chairman or any of the sub-committee directors. A request sent to the committee is usually answered by the proper sub-committee director, and in some instances where the problem is more involved or controversial, all members of the Plant Committee are asked to comment and a summary is then prepared.

Any major request, it is felt, should generally be discussed at a meeting of the whole committee, so that proper recommendations can be made. During the past six months, quite a number of questions have been presented, and the committee has tried to answer as soon as information pertinent to the subject could be assembled. At the present time, there are several requests before the committee.

One very interesting subject brought up was on the standardization of color codes and tracer designation on drop, bridle, inside, distribution frame, and ground wires. George Barney accepted this request and has done an excellent job in obtaining information from all manufacturers interested and summarized this information in his report. It is hoped that in the near future the committee can come up with recommendations on standards for wire color codes and tracer identification for the Independent telephone industry.

Another suggestion for a safety code book, which could be made available to any Independent company throughout the United States, is under consideration.

Last year our plant chairman, Dan Seitz, called attention to the preparation of a booklet covering "An Outline of Dial Conversion Procedures for the Small Company" by a special committee under the chairmanship of G. W. Miller. The draft of this booklet is now in the hands of the Washington office. I might say that this is an excellent, comprehensive, and yet short description of steps to be followed for dial conversions.

After considerable discussion among the members of the Plant Committee, it was recommended that this year we would not open the plant room which we have had for a number of years. Last year little use was made of this room, and the committee felt that the various manufacturers in their exhibits can provide answers to most questions that you may have in mind. However, I assure you that if anyone cares to

(Please turn to page 120)

Activities of USITA Radio Service Committee

By C. H. McLEAN
Chairman

(Plant Conference Address)

AT CONVENTION TIME for the past several years you have been exposed to a verbal or written report of the activities of the Radio Service Committee. These reports have stressed the value of radio as an adjunct to wire line operation and for mobile service where radio is the only means available. It has also been urged that Independents give consideration to the use of radio in their development plans, prematurely if necessary, in order to utilize available frequencies. In this connection, it should also be kept in mind that some of the frequency spectrum may be assigned to others who might otherwise become customers of the telephone company if service was available.

In regard to the frequency assignment question, an important function of the committee is to review all Federal Communications Commission (FCC) releases and proposed rule-making having to do with frequency assignments, and to prepare statements for filing with the FCC, particularly in cases where the subject matter is considered detrimental to the interests of telephone common carriers.

Before covering some of these cases let us take a look at the frequency spectrum as currently assigned in order to appreciate the relatively small amount of space available for common carrier use.

Your attention is now directed to a simplified chart (see p. 38) showing government and various non-government allocations above 25 megacycles. The shaded portions indicate exclusive allocations, and cross-hatched portions for frequency bands that are shared.

It will be observed that the bands allocated to government, designated "GOVT," constitute nearly 50 per cent of the total, the balance being divided among various non-government uses. Bands designated "C.C." are available for common carrier public services and are far from adequate, all things considered.

Below 1000 mc, presently the most useful part of the spectrum for Independent operation, common carriers enjoy the exclusive use of only .72 mc in the 450 to 460 mc band. Except for the sharing of frequencies in the 890 to 940 band, this is the sum total of the spectrum available between 25 and 1000 mc to both Bell and Independent common carriers.

As a matter of contrast, it is pointed out that bands designated "Brdcast" are allocated to TV and FM broadcasting services; thus between 25 and 1000 mc, about 75 per cent of the spectrum space available for non-government use is allocated to broadcasting.

That part designated "OPER FXD" represents the bands used for Private Point-to-Point Systems, which are in great demand.

To complete the picture, the part of the spectrum designated "Amateur" provides a service considered valuable as a training medium for defense.

Above 1000 mc in the microwave region, 3700 to 4200 and 5900 to 6425 are the most used of the exclusive common carrier bands generally for multichannel long haul toll message circuits or extensive television network facilities, but as yet of little use to Independents.

The situation might be summarized by saying that assignments in the lower frequency bands are almost exhausted or unavailable and in the upper microwave regions space is available that cannot as yet be employed to advantage in Independent operations. With the situation as it is it can be appreciated that constant vigilance is necessary by your committee and association officers not only to secure more frequency space for future operations, but also to safeguard present common carrier frequency allotments.

During the past year there have been a number of FCC releases having to do with the frequency spectrum and consequently of interest to the Independent telephone industry. Some of these cases are briefly reviewed in the following:

(1) *Docket No. 11435.* A notice of proposed rule-making issued by FCC in Docket No. 11435 has been received wherein the commission proposes to amend Section 11.251 of Part 11 of its Rules and Regulations to make communication common carriers eligible in the Power Radio Service band for radio systems to be used in connection with their construction and maintenance operations.

Telephone companies do not have the same privilege as other utilities, such as power companies, in utilizing radio in connection with their own operations. In Docket No. 9703 and on other occasions your association has filed statements with the FCC urging that some provision be made for frequencies to be used in connection with telephone plant construction and maintenance work.

Although in the past the commission has recognized our requests as reasonable, tangible results have been nil. In due fairness, it can be stated that the commission's report and order in Docket No. 9703 indicated that they would consider the requirements of the communication companies for maintenance and repair in connection with possible amendments to Part 6 of its rules which cover Public Radio Service.

The current rule-making proposal in

Docket 11435 abandons this plan and substitutes for it the plan of making communication common carriers eligible to the Power Radio Service. The commission's proposal carries with it no added frequency allocations for this service.

Inasmuch as the commission's plans involve all common carriers, it follows that some collaboration between Independents and the Bell System would be desirable in order to co-ordinate views on the channel requirements to serve the industry for at least the next 10 years.

With this in mind, the chairman of the USITA Radio Service Committee met with Bell representatives and the essence of these conversations might well be summarized by quoting the following memorandum prepared by the AT&T Company for transmittal to the Bell associated companies.

"This memorandum has been prepared as a result of discussions with our Plant people, representatives of the AT&T, Long Lines Department, the New York Telephone Co., The Bell Telephone Co. of Pennsylvania and a member of the Radio Committee of the United States Independent Telephone Association (USITA).

"It outlines some of the situations in which mobile telephone service on Telephone company vehicles would result in a faster, safer and more economical job. There are many other equally important uses. It also sets forth a preliminary study of the frequency requirements for such a radio system.

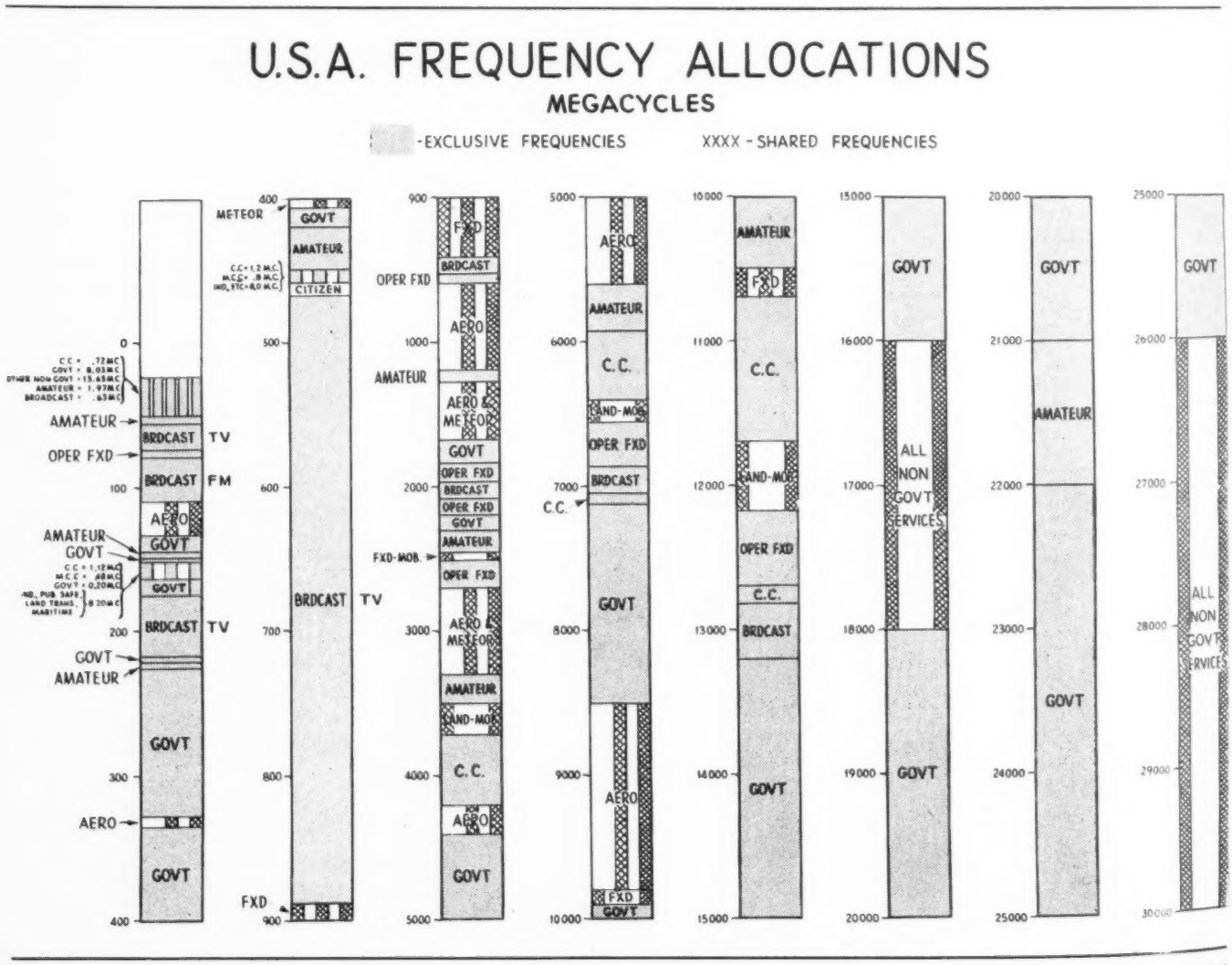
"Construction forces who by the nature of their work generally cannot be reached by telephone could be contacted for immediate dispatch to the scene of an emergency and could obtain added materials and assistance without delay, thus facilitating prompt service restoration.

"The mobile service could also be used in conjunction with hand or pack-carried sets to expedite day-to-day operations, such as cable placing and wire pulling. In congested areas installation forces are not furnished with vehicles because of the impossibility of parking near the location at which an installation is to be made. These men depend on mobile supply vans to bring them the materials, supplies and extra tools such as ladders, etc. Equipping these vans with mobile telephones would speed up the delivery of materials and expedite the installation of telephones for our customers.

"Maintenance forces of all classes, particularly in the less heavily populated areas frequently travel long distances to and between assignments. Continuous contact with these vehicles will save many miles of travel, long periods of outage and provide faster restoration of service. Also additional material or manpower can be obtained promptly when working along routes where immediate access to a telephone is not available.

"Many critical routes are patrolled continuously or at frequent intervals in an attempt to avoid damage to our plant by contractors and others. The ability to immediately report activity to supervisory forces so a man can be dispatched to a location and remain there to protect telephone plant can prevent costly interruptions and damage to plant.

"Also, following major ice and wind storms, hurricanes, etc., it is necessary to patrol damaged areas to appraise the extent of the damage, detect crosses



with power company lines, etc. Prompt reports of these conditions expedite repairs.

"Certain assignments such as maintenance of isolated radio stations, pole-mounted equipment, and lines through sparsely settled country can involve hazards to the safety of personnel and it is essential to be able to summon aid or report progress. Two men are frequently assigned to some such jobs currently where the ability to telephone for assistance would in many instances make it practical to use one man.

"The following frequency study indicates that for certain large cities a multiplicity of radio channels is required while outside of these areas the requirements can be fulfilled by a lesser number of radio channels.

"The requirements can be met in the 40, 150 or 450-mc band. However, frequencies in the 40-mc band need to be carefully zoned throughout the country in order that they could be used most effectively, particularly from an interference standpoint.

"It is doubtful that the number of frequencies necessary could be made available to implement such a zoning plan and to provide the numbers of channels required in the large city areas.

"It appears that as many as four to six 'two-frequency' channels should be made available for telephone company operational use in the large city areas.

"In view of this it would appear that the frequency selection should be made from either the 150 or 450-mc band, repeating the use of the frequencies on an appropriate geographic basis.

"The following table indicates the estimated requirements over a 10-year period for nine areas of the Bell System requiring the greatest number of radio channels:

Area	*No. of Channels*
New York-Newark, N. J.-Stamford-Bridgeport, Conn.	6
Philadelphia, Pa.-Wilmington, Del.-Camden-Trenton, N. J.	6
Boston-Fall River-Worcester, Mass.-Providence, R. I.	5
Washington, D. C.-Baltimore, Md.	4
Chicago, Ill.-Gary-Hammond, Ind.	4
Cleveland-Youngstown-Akron, Ohio	4
Detroit-Pontiac-Ann Arbor, Mich.	4
Los Angeles-Long Beach, Cal.	6
San Francisco-Oakland, Cal.	4

"For the remaining areas of the country generally only two 'two-frequency' channels will be required. These channels may be any selected from the above and two should be exclusively assigned for Bell System use with frequencies common throughout the United States in order to facilitate large area use in the construction, maintenance and repair of long haul toll routes.

"The frequencies of the remaining channels need not be the same in all areas but should be in the same frequency range to provide for frequency change in the equipment by crystal replacement.

"It is understood that frequencies are more readily obtainable in the 450-mc range. Although coverage in this frequency band is somewhat less than at the lower frequencies, compensation for this limitation can be obtained in some remote areas by the use of pole-mounted antennas to which mobile equipment could be connected to improve transmission of mobile units.

"Where necessary, the coverage area could also be extended by employing several base stations operating on the same frequency and controlled by wire lines.

"Although in some cases more equipment may be required in the 450-mc band than in the 40-mc frequency range, there are distinct advantages in using the higher frequencies. The higher frequencies are not subject to the same vagaries of interference as the lower frequencies such as from skip transmission, auto ignition systems, etc.

"In this connection we are particularly desirous of receiving comments as to whether one or two pairs of 40-mc frequencies should be requested of the FCC, notwithstanding the interference potentialities. These frequencies might better serve the sparsely settled regions, particularly the mountainous areas where it might be impracticable to establish a satisfactory 450-mc system."

Left to right: W. G. Winters of Houston, Tex.; D. O. Hood of Medford, Ore.; Carl Travers of Haddam, Kan.; Mrs. Howard Culbertson of Sterling, Kan., and H. H. Welch of Nortonville, Kan.

The response to the memorandum is tabulated in some detail as follows:

Radio System for Telephone Plant Construction and Maintenance Bell System Associated Company Requirements

	Number of Two-frequency Channels		
	40	*150*	*450*
Company	*mc*	*mc*	*mc*
Bell of Pennsylvania.. (Phila.-Wilmington-Camden-Trenton area)	2	10†	
Chesapeake & Potomac			
Washington, D. C....		2*	
Baltimore		4*	
Virginia	2	3*	
West Virginia	1	2*	
Cincinnati & Suburban	1	1	
Diamond State	(See Bell of Pennsylvania)		
Illinois	1		6
Indiana		2*	
Michigan	1		4
Mountain States		2	2
New England		5	
New Jersey		2*	
New York			
Brooklyn		2	4
New York			4
Albany	2	2	
Northwestern	2	2*	
Ohio			
Cleveland		4*	
Columbus	1	1*	
Pacific			
Los Angeles	1	3	3
Portland	2	1	1
Seattle	2	4*	
San Francisco		Several*	
Southern	1		2*
Southern New England			2
Southwestern			2*
Wisconsin	1	2*	
AT&T Long Lines.....	1		2*

All frequencies arranged for single or two-frequency operation.

†Also six additional frequencies in either 150-mc or 450-mc range for localized operation using pack-carried or pocket-type receivers.

*Either 150 mc or 450 mc.

With the possible exception of one or two areas, it is believed the number of channels arrived at in the tabulation would also be adequate to serve

Independent operations on a basis of mutual agreement with the Bell.

If there is any thought to the contrary, interested parties are free to express their opinion before the 20th of this month (October) by writing directly to the secretary of the association (USITA) or the chairman of the USITA Radio Service Committee outlining requirements over and above what has been estimated in the memorandum along with any other pertinent comment, all of which will be given careful consideration.

It should be pointed out at this time that assignments obtained for service contemplated in Docket No. 11435 are to be employed solely for telephone company vehicles and not to be used to provide public mobile service.

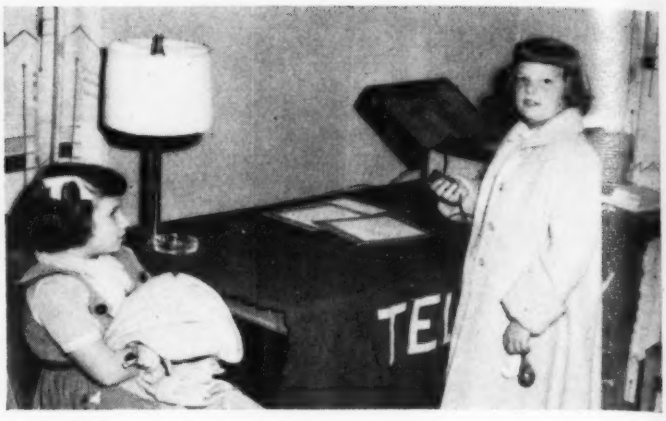
As the date for filing with the FCC re Docket No. 11435 has been extended to Nov. 2, 1955, it is proposed that the association file a statement on behalf of the Independent telephone industry setting out channel requirements based on coordinated operation with the Bell System.

It might be well to mention at this point that power companies and the REA have already indicated that while they do not question the right of common carriers to enjoy the benefits of the proposed service, they do feel Power Radio Service assignments are no more than adequate to take care of their own requirements. In this event, there is every confidence that the FCC will make the necessary channels available to meet the telephone common carrier requirements by other means at their disposal.

With evidence of the desire of the FCC to correct a situation that has been a target of criticism in the past and assuming that this will be a reality before long, an excellent opportunity presents itself for even the smallest telephone company to take advantage of radio in their day-to-day operations.

It is pointed out that this type of an installation with less complicated control and mobile equipment elements, should be attractive costwise to even the smallest operator. You are also reminded that transistor-equipped units, further simplifying mobile operation, may not be a too-far-distant development. Technical advances of this nature coupled with production on a mass basis will undoubtedly reduce the cost of mobile installations.

(2) *Docket No. 11442.* In the matter of amendment of Part 18 to establish a type of acceptance procedure for industrial heating equipment and in general to reorganize the regulations applicable to industrial heating equipment.



Daughters of Frank Thiltges visit TELEPHONY'S room to make a record for their parents.

On Mar. 11, 1955, the commission issued a public notice of the filing of a petition by the General Electric Co. requesting that 915 mc plus or minus 25 mc be added to the frequency listings under Section 18.11 (a) and 18.21 (a) of the commission's Part 18 Rules governing the use of the Industrial, Scientific and Medical Services.

On May 5, 1955, a petition was filed by the association taking exception to the proposed rule-making pointing out that the 890-940-mc band currently used on a shared basis by common carriers should be assigned to telephone common carriers on an exclusive basis to meet essential public service demands in preference to a service that has never used this band.

On July 8, 1955, the commission issued a notice of proposed rule-making in Docket No. 11442 to cover certain amendments to Part 18 of the Rules. Included in the proposed rules are two sections which, if finally adopted, would add the frequencies of 915 mc plus or minus 25 mc to the industrial, scientific and medical allocations, thus eliminating or at least hampering the possibility of obtaining an exclusive allocation in the 890-940-mc band for common carrier operation.

In brief, the notice of proposed rule making in Docket No. 11442 proposes to grant the petition of the General Electric Co. requesting that 915 mc plus or minus 25 mc be added to Sections 18.11 (a) and 18.21 (a) since it proposes to manufacture industrial, scientific and medical equipment using this frequency.

The commission has stated in justification of this action that the frequency 915 mc plus or minus 25 mc is allocated for industrial, scientific and medical purposes under the International Radio Regulations (Atlantic City, 1947). Accordingly the frequency 915 mc is being included with the other ISM microwave frequencies to be added to Part 18.

The commission stated, however, that it would consider objections to including the frequency 915 mc in Part 18 before the proposed rule changes are finalized. The date set for filing comment is Nov. 15, 1955.

Inasmuch as the ISM services have not previously utilized the 890-940-mc band, it is thought important that every effort be made to have the band allocated exclusively for point-to-point services. Accordingly it is planned to prepare and file as soon as possible a formal comment on Docket No. 11442, restating the position previously taken and asking again that the frequency of 915 mc plus or minus 25 mc not be allocated for ISM services.

In addition the commission should be requested to relax the regulations as far as international obligations are concerned in this particular instance as it is difficult to understand why the frequencies in question used in the normal way should ever become a matter of *international regulation.*

(3) *Dockets No. 10200 and 10777.* These two dockets were reported on at last year's annual convention. Docket No. 10200 refers to the cancelling of five channels in use in California by the Federal State Market News Service and is related to Docket No. 10777 covering the amendment of the Commission's Rules Governing Public Safety and Industrial Radio Services, respectively, to permit operational fixed stations licensed to a state to provide coordinated service to state agencies for the handling of public safety, administrative and agricultural information traffic on a non-common carrier basis.

You will recall that a brief was filed by the association with arguments as to why assignment should not be made to the state of California for a radio communications network.

A report and order adopted by the FCC on July 19, 1955, in Docket No. 10200, in effect, advises the Federal State Market News Service in California that it must vacate by Jan. 1, 1956, the frequencies it is now using in connection with its high frequency radio system.

In this order, the commission took

(Please turn to page 120)

At the West Coast Telephone Company

CLEAN, non-leaching PENTA-preserved poles don't "burn" hands or stain clothing

THE West Coast Telephone Co. of Everett, Washington, first experimented with Penta-treated poles in 1950. Pleased with their performance, the Company set 1900 additional poles in 1953-54. And after a successful year's trial, West Coast Telephone also installed 6000 Penta-treated crossarms in 1954.

"Our field forces report that Penta-treated poles are easy to climb because they do not 'burn' their hands or stain clothing," reports Ray Dalton, Vice-President and General Manager of West Coast Telephone. "And in the near future, we shall have positive statistics that we expect will prove our experiment with Penta-treated poles and crossarms was a profitable investment."

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MICROWAVE for Independents

By MARCUS L. DONALDSON
Peninsular Telephone Co.

(Plant Conference Address)

TWO YEARS ago on this same platform, many of you heard me encourage the use of microwave by Independent telephone companies. I said then that microwave would be used more widely in a shorter time than carrier had been used in your open-wire and cable plant.

That statement is truer today than ever. The past two years have seen more growth in the use of microwave by Independents than all previous years put together. Small as well as large companies are using it in ever-increasing amounts.

This growing use of microwave is not a blind stampede. There are many sound reasons why companies are selecting microwave over other types of toll facilities. Today, I will discuss some of these reasons to show those of you who are still hesitant what microwave can do for you. I will also add a few words of caution to show that microwave, like any other service or commodity, must be purchased only after careful consideration of all the tangible and intangible factors involved.

Reasons for Selecting Microwave

There are at least six basic reasons why microwave is often selected over cable or open-wire for a new toll facility. I will enumerate them and then discuss each in more detail. The reasons are:

(1) Low initial cost.
(2) High Quality Transmission.
(3) Reliability.
(4) Ease of Installation.
(5) Flexibility and Expandability.
(6) Low Maintenance Requirements.

If we take a closer look at initial cost, which was mentioned as the first reason for buying microwave, it will be seen as an extremely variable factor. Each individual installation must be evaluated separately. Some installations require very little additional investment beyond the cost of the transmitting and receiving equipment, channelizing equipment, and the antennas.

In other cases, where repeaters are located in remote areas or where high towers are required, the cost of providing land, buildings, towers, access roads, regular and emergency sources of power may make the cost of the microwave equipment insignificant by comparison.

In either case, the complete cost of a microwave system will often prove to be substantially less than the cost of a new open-wire or cable installation over the same route. Microwave systems longer than 15 or 20 miles generally cost less than a comparable cable system.

A good example of the short prove-in distance of microwave is the Peninsular Telephone Co.'s Tampa-Clearwater system. This 48-channel system proved in over a 17½-mile path in competition with an equivalent 22½-mile cable installation. Even if the microwave system had failed to prove in money-wise, there were so many technical advantages in its favor that it probably would have been chosen anyway.

A second reason for the strong trend to microwave is the excellent transmission quality obtained from microwave circuits. Our experience at Peninsular has been that microwave is equal to, or better, in transmission quality than either open-wire or cable. We now have two microwave systems in operation and four more under construction for telephone use.

We also have five microwave systems for television use. Our favorable experience with these systems has proved that the transmission quality obtained from good equipment—properly engineered and installed—meets every possible toll requirement.

A most important reason for selecting microwave in many parts of the country is its reliable operation under adverse weather conditions. A well-constructed microwave antenna installation can be virtually storm-proof. I am sure that all of you have read—and many of you have seen first-hand—what the hurricanes, that have ravaged the eastern seaboard in recent months, can do to wire and cable systems. These storms have cost telephone companies millions of dollars in damaged wire and cable plant and in lost revenue.

Microwave systems, however, have generally withstood the storms very well. Antenna installations can be constructed to withstand almost any wind. The provision of a standby emergency power source makes microwave one of the most reliable transmission media available.

In addition to being nearly storm-proof, microwave has a tremendous advantage over cable because of the ease with which it can be installed. Even systems which require repeaters in remote and rugged country are installed more easily than cable systems which must be constructed across the same difficult terrain. In some cases, microwave is the only possible solution.

Most microwave systems likely to be installed by an Independent company are relatively short with only one hop, or, at the most, three or four hops. Such systems can usually be installed and turned up for service in a few weeks. One of the Peninsular systems was completely installed in only 10 days. In addition, there are no problems of right-of-way or difficulties in

laying cable in congested business or residential areas.

A very important advantage of microwave in these days of rapid population growth and expanding economy is the ease with which it can grow—quickly and inexpensively. One type of microwave now available can be installed initially with less than 12 channels, then expanded later by the simple addition of more channelizing equipment to a total of 120 channels on the one radio channel. By the installation of additional transmitters and receivers on the same antennas, this system can be expanded to as many as 360 voice channels.

The channelizing for this system is arranged in such a way that a failure in the channelizing equipment cannot affect more than 24 channels. In a fully expanded 360-channel system, failure of any one radio transmitter or receiver will not affect more than 120 channels. This is better reliability than you can obtain from a single cable.

Many people seem to think that microwave requires frequent and expensive maintenance. However, this need not be the case. High-quality microwave equipment is available from manufacturers who know the problems of the telephone industry and who have designed their equipment so that it can be maintained using normal telephone procedures. With such equipment, plus the advantage of having the maintenance concentrated all at the terminals or repeaters, the actual cost of microwave maintenance should be less than that required for a cable or open-wire installation.

For some minutes now, I have been extolling the virtues of microwave. All that I have said is true and is a compelling argument in favor of microwave. But, there are some things you should consider before any microwave installation is finally decided upon. Several factors need careful examination and consideration. Some of these are tangible things and concerned with the equipment, its cost, and its performance. Others are more intangible but will certainly affect the long-range service and satisfaction you should get from a microwave system.

On the tangible list, perhaps one of the most important items is the cost of an installation. Don't let yourself be sold solely on the price of the equipment alone. All systems are not alike. Generally, the best systems cost a little more, but it's well to remember that quality doesn't really cost—it pays. For, as a public utility, a telephone company cannot afford to use mediocre or inferior equipment.

Examine the prices of different manufacturers and find out what you are getting for your money. Look not only at the price of the channelizing, transmitting and receiving equipment, but also look at the performance of the equipment and the amount of personalized assistance the manufacturer and his distributor are willing to give. Items such as telephone-type construction and readable instruction material—written by telephone people for telephone people—are worth real money.

Another tangible factor to be considered is the performance specifications of different makes and types of equipment. Compare all the technical features and specifications between different systems. Try to make arrangements to inspect an operating system of the type you are considering.

In considering the aspects of any system, don't overlook the matter of frequencies. The FCC has allotted certain frequencies for the common carrier services. You will find it most difficult to have them change rules, allowing you to have other than frequencies in the common carrier band. Peninsular has had very good results with systems in both the 900-megacycle and 6,000-megacycle bands. We have used both of these frequencies on over-water hops and have not experienced any fading of either of these frequencies when correct engineering is applied.

One of the advantages I cited for microwave was the small amount of maintenance required. While this is true of some types of equipment, it does not hold for all types available today. Important indicators of maintenance requirements are the number of tubes and the number of controls that require adjustments. The fewer tubes and controls, the better.

An important item to look at from the maintenance point of view is the channelizing equipment. This equipment, though often sold with the radio equipment, is really telephone carrier equipment. As such it should be compatible with other carrier equipment in your plant.

Some manufacturers have developed basic channelizing equipment that is the same for microwave, cable, and open-wire transmission. If this particular type of channelizing is used for all of your toll plant—cable and open-wire as well as microwave—the maintenance costs can be greatly reduced. Spare parts for your cable and wire-line carrier will also be spare parts for your microwave channelizing equipment. If you need any land-line extensions of your microwave system, this particular type of carrier will permit channels to be transferred from the microwave to land-line carrier at carrier frequencies, with a large savings in first cost as well as maintenance cost.

Since the telephone industry is one of steady growth, an important consideration in the planning of any toll facility is the provision for that growth. Some types of microwave equipment are designed so that systems providing only a few voice channels require a large amount of radio spectrum. The only way to increase the capacity of such systems is to use additional frequencies.

Our company has found that the ideal system is one using a minimum of radio frequency spectrum and channelized with frequency division type carrier. Such systems may contain only a few channels when first installed, but they can be expanded economically as increases in traffic demand.

A very important factor to be considered before any microwave installation is finally decided upon is the amount of engineering and skilled labor required to plan and install a microwave system. To some companies, this is the most formidable obstacle that must be overcome before microwave can be used.

(Please turn to page 124)

This group was photographed outside of convention meeting room. Photographer's helper failed to get names for this "shot."

Field Use of New Developments

By PAUL HENSON
Lincoln Telephone & Telegraph Co.
(Plant Conference Address)

YOUR SUB-COMMITTEE (of USITA Plant Committee), in preparing this paper, has collected and analyzed data from many sources. Only those items or procedures which are relatively new and significant have been included. In a paper of this type it is not feasible to give a detailed technical treatise on each subject; therefore, we have attempted to merely present the basic facts regarding new and different techniques, developments and equipment.

In reviewing technical magazines and new practices of major companies, the committee notes an increasing kinship between the telephone and electronic industries. New developments in the past few years clearly indicate that electronics will plan an increasingly important part in the telephone field. There is little doubt that transistors, microwaves, printed circuits and even the Solar battery—to name only a few "electronic items"—will be major telephone tools in the years ahead.

Data on B Rural Wire

Six-pair B rural wire is now used extensively in both Bell and Independent plants. Like any other new development it has certain limitations which must be taken into account in its application. A paper entitled "B Rural Wire," as presented at the 1955 winter session of the AIEE, contains much useful information on this new plant element. Some of the principal facts brought out in the paper were:

(1) Bell companies are using B (six-pair) wire for both rural and urban use. In the urban application it is being used to defer expensive cable work. As many as three units (18-pair) of B wire are sometimes placed in a block in order to defer the installation of lead sheath cable.

(2) In heavy loading areas spans are being kept to 200 feet or less, but in medium and light loading districts spans as great as 400 feet have been used.

(3) The wire is being placed with as little as 4-inch sag in a 100-foot span to 4 feet or over in a 250-foot span.

(4) Fused type protectors are required at subscribers premises served by B wire as the code considers it the same as an open conductor.

(5) From the standpoint of inductive noise the B wire is somewhat less susceptible than open wire because of its higher mutual capacitance and the shielding effect on the grounded support wire.

(6) On high voltage joint use leads of over 3 miles, drainage protection is usually required.

(7) From a transmission standpoint the 19-gauge B rural wire is roughly about the same as 19-gauge cable. The loss at different frequencies for both dry and wet conditions is shown below:

TRANSMISSION CHARACTERISTICS OF B RURAL WIRE (NON-LOADED)

Frequency	Attenuation Per Mile—db	
Cycles	Dry	Frozen Rain
200	.54	.75
500	.84	1.18
1,000	1.16	1.72
2,000	1.56	2.07
3,000	1.90	2.57
5,000	2.18	2.92
10,000	2.60	3.62

(8) B wire can be successfully loaded to reduce loss. The loss at various frequencies for H-88 and H-44 loading is also shown below:

TRANSMISSION CHARACTERISTICS OF B RURAL WIRE (LOADED)

Frequency	Attenuation Per Mile—db	
Cycles	Dry	Mist and Fog
(a) H-88 Loading		
200	.37	.48
500	.41	.54
1,000	.43	.61
2,000	.46	.82
3,000	.54	1.71
3,200	—	2.87
(b) H-44 Loading		
200	.37	.49
500	.41	.54
1,000	.44	.61
2,000	.47	.77
3,000	.50	.95
3,500	.52	1.08

(9) Simple rules that can be used in applying B wire in subscribers loop design are:

(a) Limit total length in any loop to 50,000 feet.

(b) On loops over 18,000 feet use H-88 loading.

(10) From an economic standpoint B wire plant costs approximately 40 per cent less than open wire (six circuits and one arm).

(11) Savings in annual charges by the use of B wire instead of open wire is such that the cost of the rural wire will be recovered in 2½ years.

Solar Battery Developments

Since the announcement of the Solar Battery in April, 1954, some new development work has taken place and the latest information on this remarkable device is:

(1) Newly developed cells are 15 times more effective than the best previous solar energy convertors. Efficiency of early cells (1954) was only 6 per cent but is now up to 11 per cent.

(2) Use of the solar cell to charge small storage batteries for operation of a transistorized rural carrier system is presently undergoing field tests. Similar applications are contemplated.

(3) Experimental solar cells of the S-1 Silicon type (see *Fig. 1*) can now be purchased for approximately $25 each. These have an open circuit voltage of 0.2 to 0.5 volts, and about 0.25 volts across a 10-ohm load. Up to 10 milliwatts of power can be obtained from one of these cells under average sunlight conditions.

(4) By electrically linking a number of cells together and powering them by a normal sun—up to 100 watts per square yard of silicon surface can be generated.

(5) A very significant fact is that the solar cell or battery is regarded by scientists as the first real solar energy converter.

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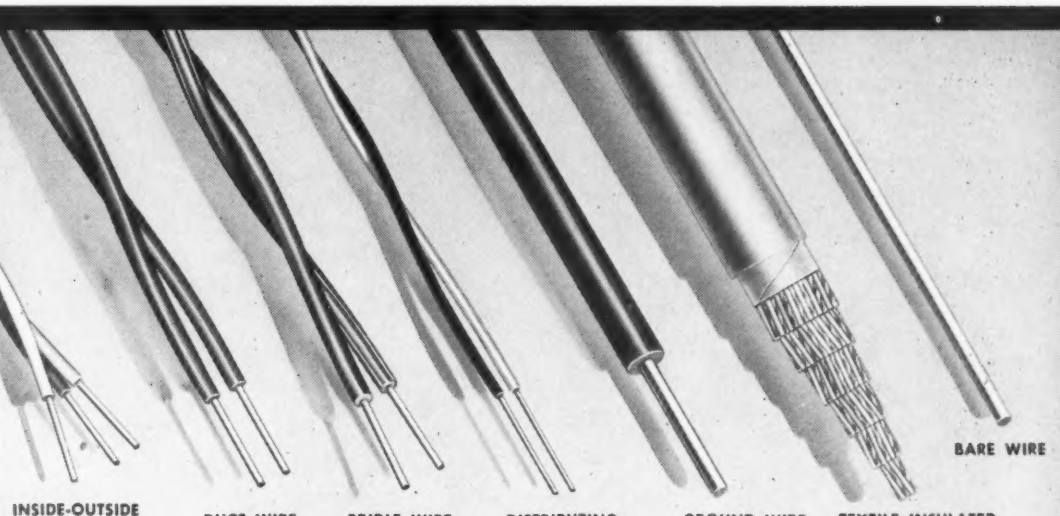

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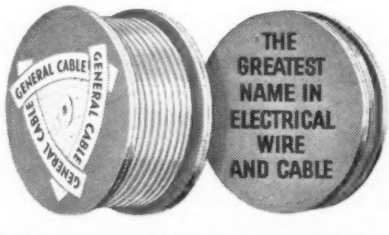

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Transistor Notes

The transistor, since its invention about seven years ago, has been hailed as a contender for the position that the vacuum tube has held for so long. In the seven years of its existence, this revolutionary device has reached a state of development far greater than that of its predecessor, the vacuum tube, considering the relative age of each. In fact, some of the early designs are now obsolete and specialized types are rapidly being developed to fulfill specific application needs.

The new types that have been announced during the past year indicate that frequency response and power handling capabilities are being constantly improved. New types have a much better high frequency response than the earlier models and are now being used at frequencies as high as 20 megacycles. Likewise, special construction techniques, primarily concerned with dissipating heat, have made possible power outputs on the order of five to seven watts per unit.

Transistors are already being used in telephone equipment and could conceivably, in time, replace practically all vacuum tubes. Typical telephone devices that now employ the transistor for amplification, oscillation or control are negative impedance repeaters, central office switching systems, operators' headsets and impaired hearing telephone sets. Telephone men who are interested in experimenting with the transistor will welcome a new low priced unit which is now commercially available at less than $2.00. *Fig. 2* shows typical transistors now available and how they are used in common amplifier and oscillator circuits.

Even *Business Week* in its Sept. 17, 1955, issue saw fit to pay tribute to this newcomer to the electronic field. In a two-page article, the magazine cites the following:

(1) In new electronic equipment under development, 22 per cent will employ transistors in lieu of vacuum tubes. Next year it is predicted that the figure will be 38 per cent.

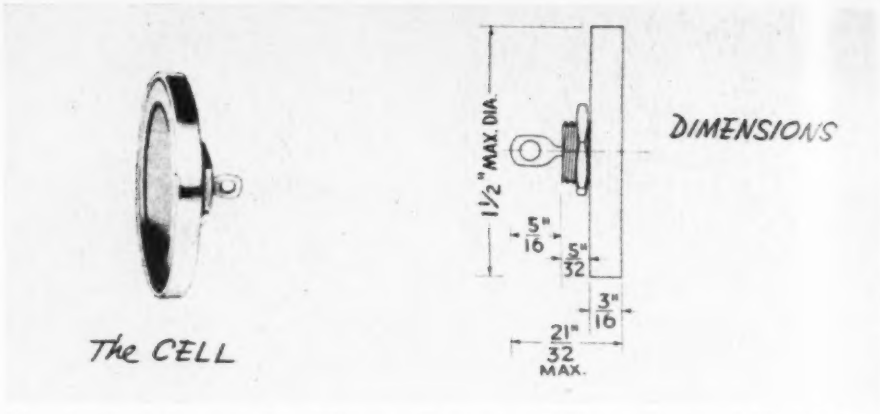

Fig. 1. Experimental S-1 Silicon cell now available. (Output 0.25 volts into 10 ohms).

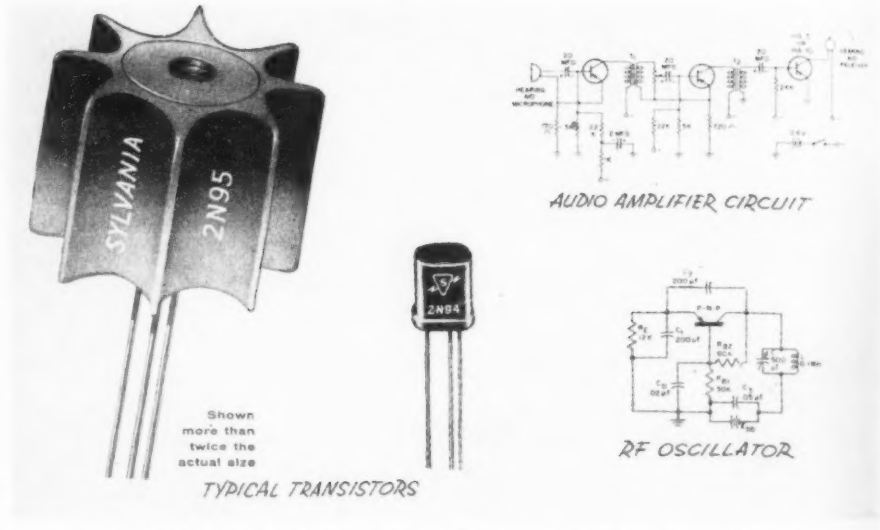

Fig. 2. Typical transistors and audio amplifying transistor circuits.

(2) Transistors have been improved to the point where the failure rate is roughly 14 per cent that of vacuum tubes.

(3) Space savings by the use of transistors in the design of electronic equipment is amazing. One manufacturer reduced the space required by an electronic unit from 288 cubic inches to only 18 cubic inches.

In brief we may say that transistors offer the advantage of extremely efficient use of the available power supply even at high power levels. The absence of high temperatures and the rugged construction make for a service life and reliability that offers obvious advantages for unattended communication or control applications. Some problems have been encountered in the past, due to manufacturing difficulties and quality control. Now, however, more than one and one-half million units are in use in hearing aid applications alone and more applications are being marketed every day. In short, the vacuum tube has met a contender for its position that is a worthy challenger.

NO. OF PAIRS	SIZE AWG	O.D. INCHES APPROX.	WEIGHT LBS. PER 1000 FT. APPROX.	RATED STRENGTH LBS.	DC RESISTANCE OHMS PER MILE	ATTENUATION DB PER MILE AT 1000 CYCLES	MUTUAL CAPACITANCE MICROFARADS APPROX.
6	19	.450	121	1512	206	2.0	.085
11	19	.560	203	2772	206	2.0	.085
16	19	.675	252	4032	206	2.0	.085
26	19	.800	388	6552	206	2.0	.085
6	22	.380	86	756	414	2.7	.075
11	22	.480	128	1386	414	2.7	.075
16	22	.540	183	2016	414	2.7	.075
26	22	.670	263	3276	414	2.7	.075

Fig. 3. Characteristics of copper-steel self-supporting communications cable.

Transatlantic Cable

Years of development work are approaching fruition with the start in June of this year of the laying of an underseas transatlantic telephone cable. The first submarine telephone cable between the United States and Europe is expected to be in commercial operation by late 1956. The 35-million-dollar project is a joint undertaking of the American Telephone & Telegraph Co., the British Post Office and the Canadian Overseas Telecommunications Corp.

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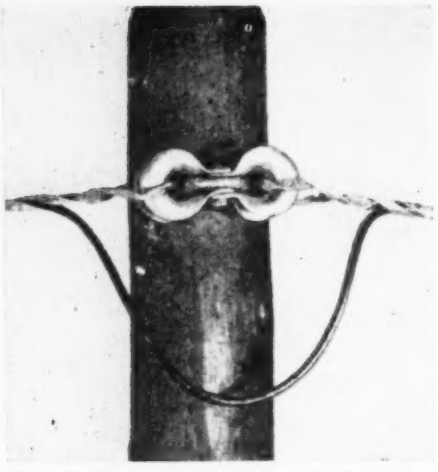


Fig. 4. Use of pre-formed ties with self-supporting cable.

the coaxial type with two cables, one for each direction of transmission. The submarine cable portion between Clarenville, Newfoundland, and Oban, Scotland, will be laid to depths approximately three miles. Stretching some 2,000 nautical miles, each of the two cables will contain 52 submerged repeaters.

The 36 high-grade telephone circuits derived will be carried by microwave radio-relay from Portland, Me., to Nova Scotia where the radio circuits will connect with a 300-mile submarine cable to Newfoundland. At Oban, Scotland, the transatlantic circuits will be taken to London by carrier cables. In London, it will be possible to connect any transatlantic circuit to any one of the existing submarine cable circuits to the continent of Europe.

Recent announcements indicate that a similarly constructed cable is now being engineered for placement between the West Coast and Hawaii.

Citizens Radio Progress

At the 1945 FCC radio spectrum hearings, telephone representatives pondered on the possible adverse effect on the industry of the then proposed Citizen's Radio Band. Some thought the proposed radio transmitting channels which were to be made available to any U. S. citizen might result in some replacement of certain services rendered by the wire companies. Therefore, a look at the present status of Citizens Radio and developments to date may be of interest.

First inaugurated in 1949, the service has shown increasing growth since 1952 yet has failed to have the mass appeal that was predicted for it at the 1945 hearings.

At the present time the FCC has authorized 21,300 transmitters to 12,334 users.

Users of Citizens Radio are assigned

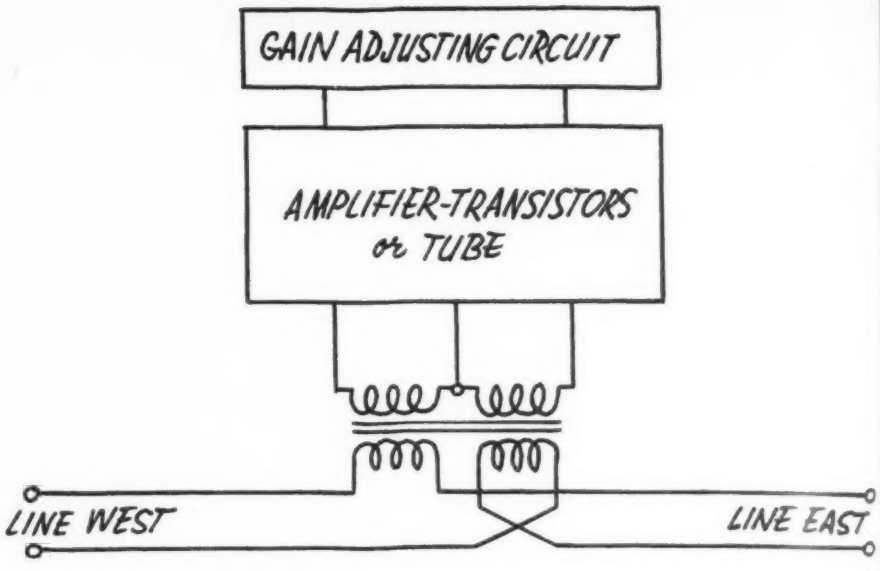


Fig. 5. Schematic of a negative impedance repeater.

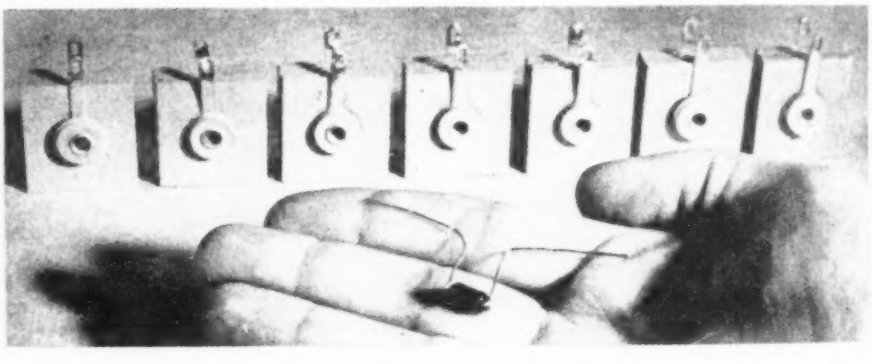


Fig. 6. Silicon rectifier compared to equivalent selenium rectifiers of similar voltage and current characteristics.

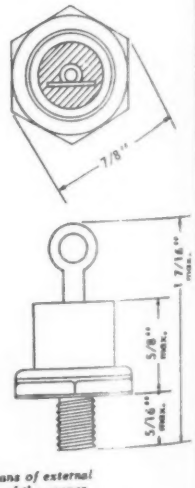
ELECTRICAL DATA

RATINGS - ABSOLUTE MAXIMUM VALUES:

WITH HEAT RADIATOR			
Case Temperature ▲	30	70	170 °C
RMS Voltage	125	125	125 volts
Peak Inverse Voltage	200	200	200 volts
Average Rectified Current	15	10	5 amperes
RMS Rectified Current	25	15	7.5 amperes
Peak Rectified Current	50	30	15 amperes
Dissipation	40	20	10 watts
WITH NO HEAT RADIATOR			
Ambient Temperature		25	170 °C
RMS Voltage		126	125 volts
Peak Inverse Voltage		200	200 volts
Average Rectified Current		2.0	0.5 amperes
RMS Rectified Current		3.0	0.7 amperes
Peak Rectified Current		6.0	1.5 amperes
Ambient Temperature Range		-55 to +170	°C

CHARACTERISTICS: (at 25°C)

Maximum Forward Voltage at 5.0 amperes	1.5 volts
Maximum Reverse Current at 175 volts	15 ma.
Maximum Reverse Current at 200 volts	25 ma.



▲ *These ratings assume the rectifier is maintained at or below the specified case temperature by means of external cooling such as a heat dissipator. The case temperature should be measured at the circumference of the copper base. The temperature may be determined by use of a thermocouple or such indicators as temperature sensitive lacquers.*

Fig. 7. Electrical characteristics of one type silicon cell now availa[ble].

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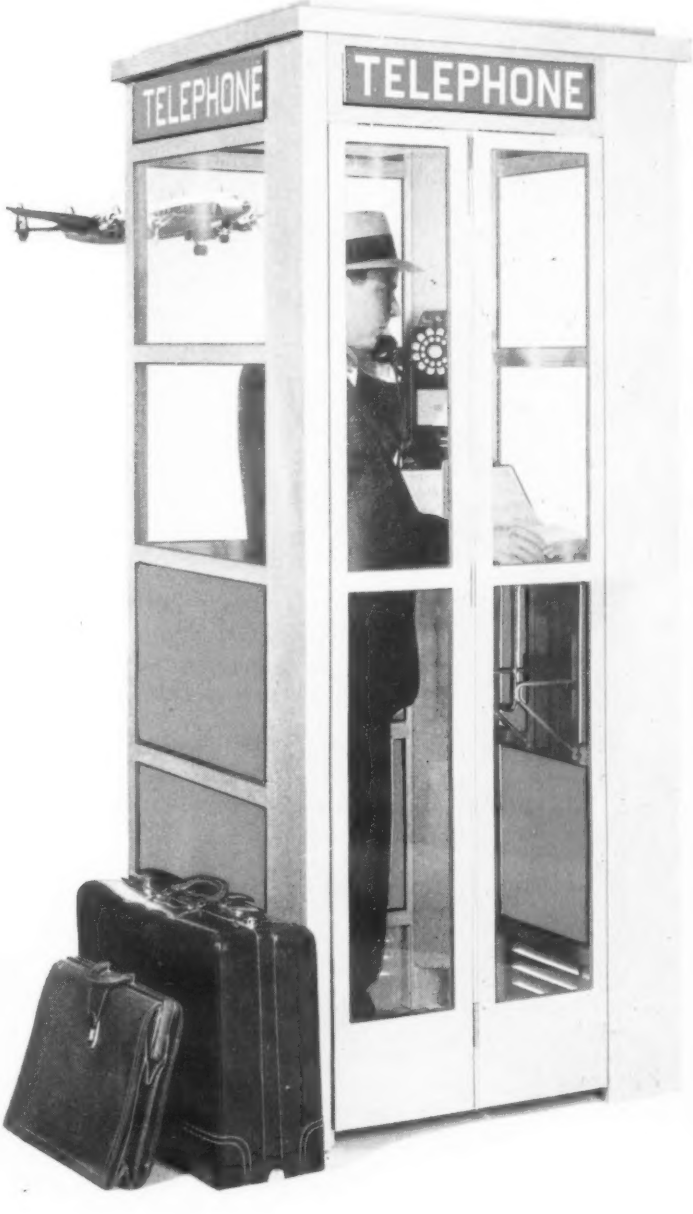


REYNOLDS ALUMINUM FABRICATING SERVICE

no specific frequencies but the station must operate inside the band of 460 to 470 megacycles, using equipment approved by the FCC. High equipment costs have probably been one of the retarding factors in the growth of this service.

Typical users of Citizens Radio are: Construction companies, local truckers, repair servicemen, department stores, etc.

Self-Supporting Cable

Self-supporting multi-pair sheathed cable has been a subject of frequent discussion at telephone conventions the past few years. Several operating companies that have pioneered in placing this type of construction (which makes use of plastic jacketed cable but no supporting strand) report good results. In general, however, the industry has been slow to adopt self-supported plastic sheathed cable, though the supported type has become quite popular. A paper presented at the Army's Symposium on Wire and Cable set forth a new approach to the self-supported cable, viz, the use of high strength cable conductors. By providing copper-steel conductors in the place of the usual soft drawn copper, a multi-pair plastic sheath cable is claimed to have sufficient strength to permit dispensing with any supporting strand.

This cable has been made and is being field tested and used in both 19 and 22-gauge and in sizes seven to 26 pairs. Mechanical and electrical data are given in *Fig. 3*.

A prime problem with self-supporting cable would appear to be one of proper support at deadends as well as at intermediate points. Performed supports are reported to have proven successful for use on self-supported cable. *Fig. 4* shows how these performed ties are used at an intermediate pole.

Negative Impedance Repeater

This repeater which is now available from Independent suppliers is radically different from former types and would seem to offer the following advantages for specific types of installations:

(1) Lower initial cost than former repeaters.

(2) Low operating costs.

(3) No special bypass equipment required for signaling and supervision.

(4) Can be used on toll circuits, inter-office trunks, long subscriber loops and private line talking circuits, dial or ring down, loaded or non-loaded cable or open wire circuits.

(5) Requires less space than hybrid-coil type repeaters.

(Please turn to page 125)

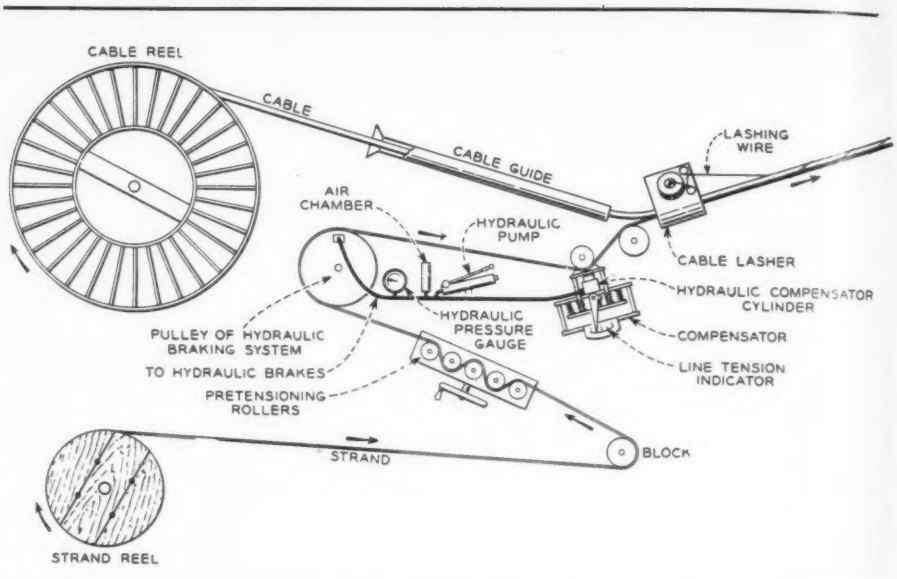


Fig. 8. Setup for pre-lashing cable. (Courtesy, Bell Laboratory Record.)

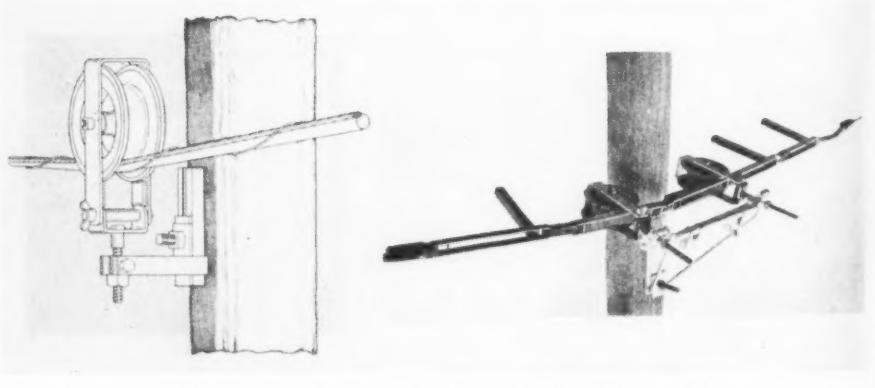


Fig. 9. Arrangement for passing cable by the pole.

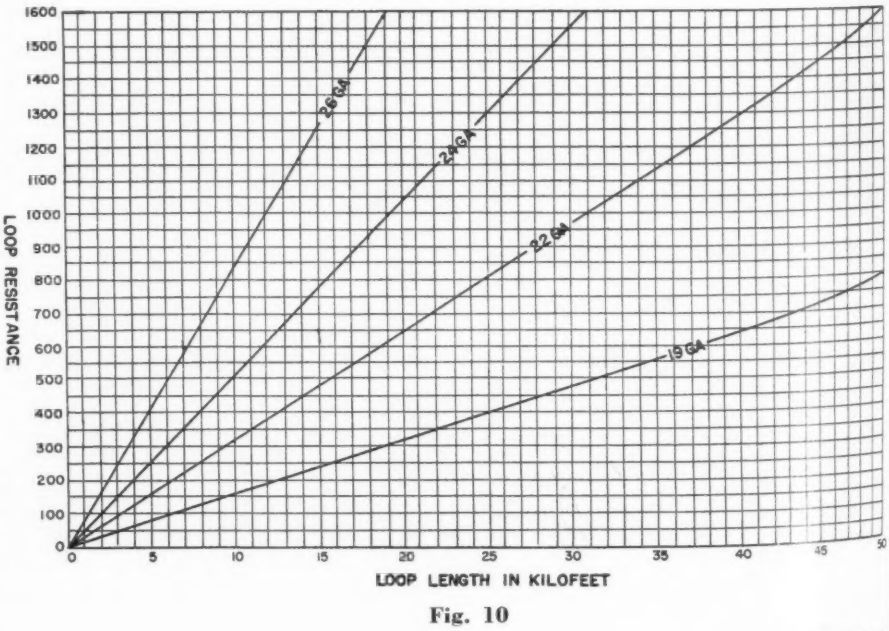


Fig. 10

Spotlighting toll service—

CALCULAGRAPH

...speeds toll service

...protects toll revenues

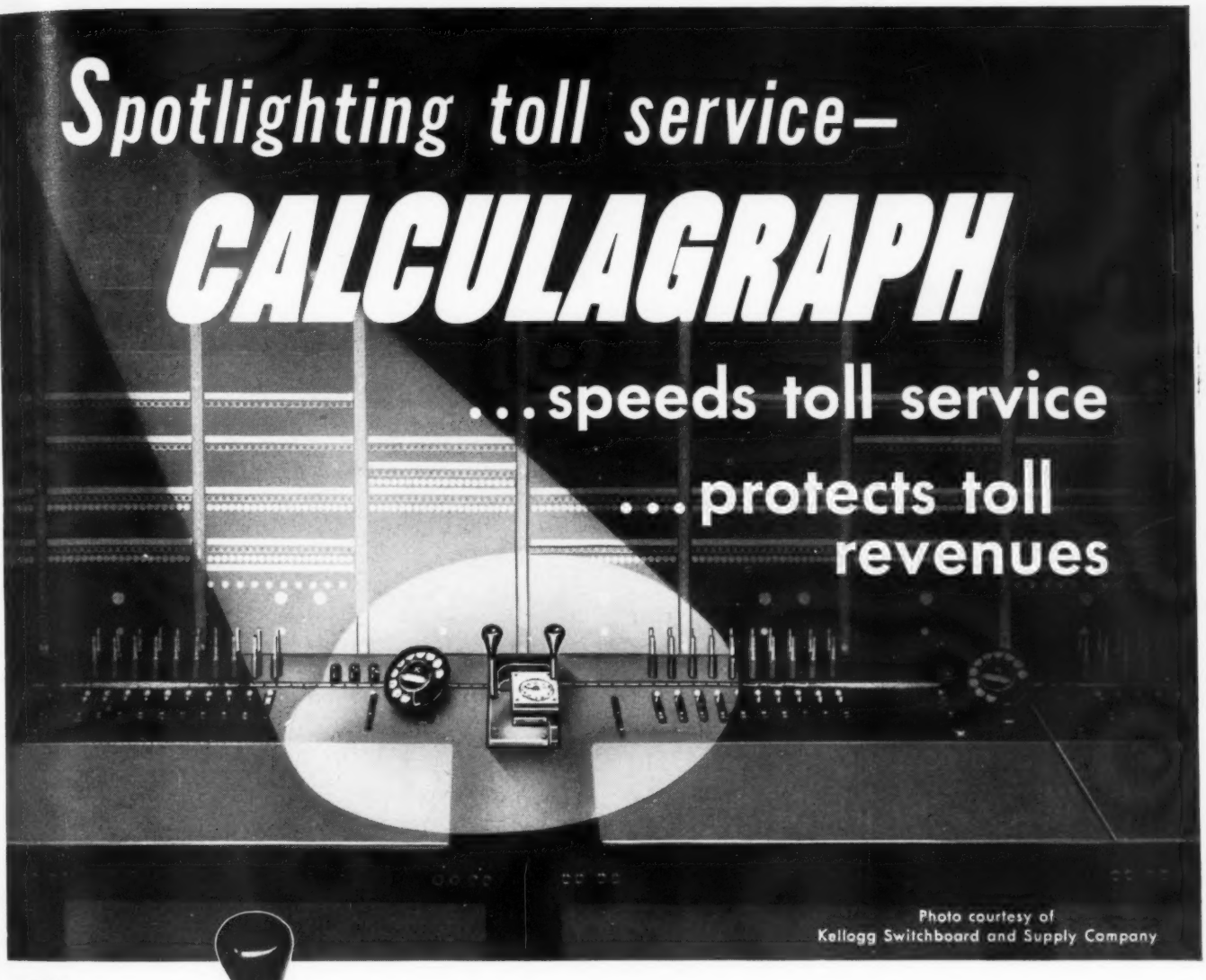
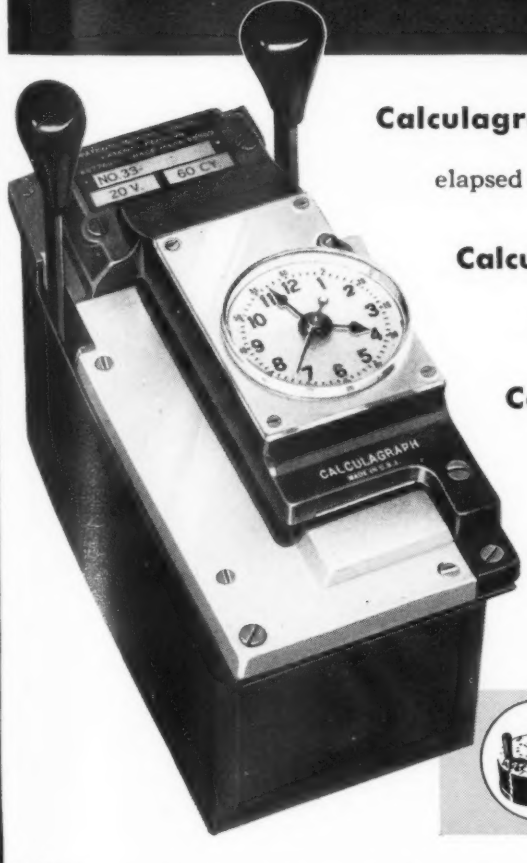


Photo courtesy of
Kellogg Switchboard and Supply Company



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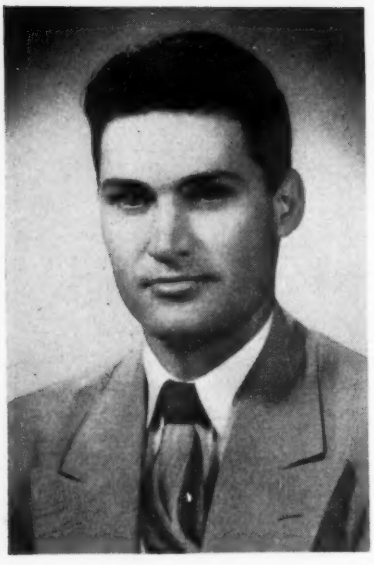


Plant Training Program

By W. C. GAYLOR

General Telephone Co. of the Southwest

(Plant Conference Address)

IN PAST YEARS, many of our plant people have been trained on the job by the more experienced personnel. However, as our plant continued to expand and much of our telephone equipment became considerably more complex, there simply were not enough experienced people to go around. Our inexperienced employes then had to learn what they could by themselves, and many of our experienced employes were finding it difficult to keep abreast of new circuits and equipment.

Unorganized "self training" is often inadequate and costly. It quite frequently results in poor service, poor customer relations, wasted time, wasted materials and a dissatisfied employe.

In the latter part of 1953, our management decided that an organized plant training program could be established, beginning in 1954. Its primary purpose would be to give our employes proper job knowledge and develop their ability to use this knowledge effectively. Such a program should actually cost us less money, over-all.

Before organizing our plant training program, we decided that it would prove helpful to find out how other telephone companies were training their plant personnel. We visited with one of the larger companies and attended some of their training sessions so that we could become familiar with the general problems associated with an organized training program.

This information proved quite helpful even though we could not apply their particular training program in our company. Training material being used by other companies within our own system was obtained and evaluated to determine how well it might apply to our program. We soon found that some training material to fulfill our needs was readily available, but we would have to prepare a sizable amount of our own material.

It was obvious that a considerable amount of time would be required to provide all of our plant personnel with complete training; however, specific training required to correct poor performance could be done over a shorter period.

As our next step, we made a general survey of our plant performance to assist us in determining what over-all training was needed for our plant personnel, and what specific training was most urgent. An analysis was made of the different plant jobs where the need for training was most pressing. This analysis enabled us to decide what training was needed to equip those personnel with the proper job knowledge and ability.

We discovered that many of our employes had insufficient "basic knowledge" that was essential to the efficient performance of their jobs. This condition was acute in station installation and maintenance, in central office maintenance, and the maintenance of carrier and toll equipment. There was a lack of consistency, efficiency and economy in part of our work. A few key personnel were handling much of the trouble load.

In our company, we have in operation eleven different types of automatic-dial central-office switching equipment; numerous different types of telephone instruments; over 12 different types of carrier telephone equipment, many different types of special station equipment, PBX, manual switchboards, toll terminal equipment, and countless other items. Our exchanges are scattered over five states. These training problems were not easily resolved. However, we decided to begin our training program with "basic training" because this would allow our employes to progress much faster as more advanced training was necessary and it would give immediate relief in our installation and maintenance problems. This "basic training" would be followed by more advanced instruction and would serve as a "prerequisite" to further training.

An adequate working knowledge of electrical fundamentals and apparatus is essential for the proper installation and maintenance of telephone plant, since electricity is used extensively in the operation and testing of telephone equipment. Personnel must know *how* equipment works and the proper installation and maintenance procedures.

The electrical knowledge required for the different jobs is varied; therefore, only the necessary electrical fundamentals that are applicable to the particular field of work are being taught in our basic courses. In this training we were quick to eliminate all electrical theory it would be "nice to know" and settled for only that part our personnel would "need to know" in order to perform their jobs efficiently and safely.

It was decided that we could train our plant personnel in three ways, namely, in a centralized training center, off-the-job; in the field, off-the-job; and on-the-job. This type of training was further classified as "major off-the-job," "minor off-the-job" and "on-the-job" training, respectively.

Since a large number of our plant people would directly benefit from formal instruction, a centralized training center was established because it would be too costly to provide certain training effectively in the field. At the present time classrooms are equipped

(Please turn to page ( )

for training in station and PBX equipment, central office equipment, and toll terminal equipment. All major off-the-job training is being conducted at this center.

A number of minor off-the-job training sessions are now being conducted in the field. This training is done primarily to prepare personnel for expected work assignments. Three full-time plant supervisory personnel are assigned to our off-the-job training.

Since training employes is an essential part of good supervision, much of our on-the-job training is being done by first-line plant supervisors.

Our new training program starting rolling in August, 1954, when we began the "Basic Station Installation and Maintenance Course" with our plant supervisory personnel attending the first classes. This is a 40-hour training course designed to furnish necessary basic training for personnel who install and maintain station equipment.

We found that it was important to begin training with supervisory personnel, not only because they must supervise the craftsmen who actually do the work, but because it is instrumental in coordinating training to meet actual needs. It is important that supervisors know first-hand what training their men will receive so that they can evaluate how much their men will benefit from the training.

The "Basic Station Installation and Maintenance Course" consists of training in:

Principles of telephone instruments.
Wiring and ringing arrangements.
Routing, placing and terminating inside and outside wiring.
Placing station equipment.
Circuit testing and fault location.
System practices.
The operation of paystation equipment.
Customer relations.
Accident prevention.
Other work practices and accounting.
Employe relations.

The classroom is equipped with a main distributing frame, outside cable, cable terminals, poles, drop wire, students' chairs and tables, a blackboard, demonstration units, workbenches, telephones, an open-wire lead, a sound motion picture projector with screen, a "mock-house," and other miscellaneous training aids and equipment.

The course begins by going over written specifications on drop and block wire. Motion picture films are used to stress the importance of adequate sag, tree clearance and how to place drop wire and attachments for different situations. The drop wire plant in the classroom is used to illustrate applications.

Specifications are covered for station equipment and inside wiring, utilizing actual plant equipment, written specifications and motion picture films. One film shows the complete job of installing a subscriber's stations and stresses the importance of good service, safety, and good customer relations.

Another film emphasizes the necessity for planning work. In this film, one installer never plans his work and naturally does everything the hard way, resulting in poor performance, poor customer relations, and extra work. Another installer is shown doing the same work with proper planning. He is very efficient and his work is easy and enjoyable for him to perform.

Mrs. E. H. Danner (foreground) of Sherman, Tex., making a record in TELEPHONY's room while Lucille Russell of TELEPHONY looks on.

Next, we study basic electric fundamentals applied to telephone work, beginning with a practical description of direct and alternating current. Excellent films on electrical fundamentals are shown to the class, followed by explanations and demonstrations that illustrate applications to actual telephone plant. We have found that when technical training is presented in a simple, practical way, it is faster and more effective. We only go far enough into electricity so that an installer or repairman can understand how a telephone works, and how to properly use his test equipment.

The functions of the different parts of the telephone instrument are explained—such as the transmitter, the receiver, the induction coil and the ringer. Then the circuits of a modern anti-side tone instrument are explained. An animated motion picture film illustrates the operation of the different telephone parts and circuits. Each student is given a telephone with all wiring disconnected. As the instructor draws the primary circuit of the telephone, step-by-step on the blackboard, the students wire this circuit in their instruments. When they have completed wiring the primary circuit, the students test their telephones and observe its functions, such as seizure of central office equipment, the control of automatic switching equipment with the dial, and transmission one-way. The instructor draws in the secondary circuit; the students wire this circuit in their telephones; and if their wiring is correct, they can now hear over their instrument. A one-party ringing circuit is drawn up; the students construct the circuit in their telephones and test it for ringing.

Following the basic functions of the telephone, other ringing circuits are explained, such as divided, harmonic, and superimposed. Each student wires and tests his telephone for all of these ringing arrangements. A film helps explain how gas filled tubes work. A demonstration board is used to assist in the explanation and wiring of superimposed ringing arrangements. Each student is shown how to properly adjust ringers.

Special steps necessary for the reduction of induced noise are explained, including the application of rare gas relays and drain coils.

Next, a demonstration telephone trouble board is used to show how to properly test and locate trouble in a telephone instrument. This demonstration is wired so that the instructor can place a maximum of 12 different cases of trouble into the circuit, by using keys. Both the hand test set and ohmmeter methods of locating trouble are ployed; and all students participate.

We also show the hand test set and ohmmeter methods of locating trouble in the outside plant. Students take turns locating trouble we have placed in the classroom plant layout. The use of the magneto test set with locator is demonstrated using an artificial line.

The operation of postpay and prepay paystation instruments are explained by going over the circuit drawings and demonstrating the operation with actual equipment.

A safety discussion is conducted, using films and safety code book. Safety is stressed throughout the course in all work practices.

The course text is concluded with a session on customer relations, using films, written instructions for installer-repairman, and classroom discussion.

The methods and results supervisor conducts a general discussion period covering service orders and other routines, pointing out current errors and how to avoid them.

(Please turn to page 132)

Equipment Planning for Toll Dialing

By C. M. DAVIS

General Telephone Co. of California

(Plant Conference Address)

THE SUBJECTS of automatic toll ticketing, inter-toll dialing, operator toll dialing, nationwide operator and customer toll dialing or the latest designation—Direct Distance Dialing—have become familiar terms to telephone operating people during the past 15 years and increasingly so for the last 10. Due to the many ramifications inherent in the foregoing, it becomes practically impossible to separate, for engineering or study purposes, the various elements such as CAMA, nationwide operator and customer toll dialing, the several available types of automatic toll ticketing, universal numbering plans, terminal per line versus terminal per station and similar associated functions.

As a result, and even though the nationwide toll dialing program is not directly involved, practically every Independent central office has been or will be affected in some manner by the technical advances taking place due to the progression toward limited network operating and customer toll dialing. This particular phase in the advancement of the art would continue even though the Bell System's long-range plans were not involved.

Based on Bell Systems estimates, approximately 50 per cent of the toll and multi-unit calls in the United States will be operator dialed and about 25 per cent customer dialed by the end of 1955. This latter figure primarily includes the bulk-billed, multi-unit traffic of the larger metropolitan areas with relatively few long-haul toll calls being customer dialed. At some future date (objective 1965) the Bell System estimates that up to 80 per cent of all toll calls in the United States will be customer dialed with the remaining 20 per cent representing operator dialed, person-to-person, collect, time and charge and other calls which cannot be completed by the customer.

In order to achieve this objective, several methods of providing operator and customer toll dialing will be utilized, but outside of the larger metropolitan areas, the Bell System Centralized Automatic Message Accounting (CAMA) method appears to be the most practical and economical approach for the Bell System. In most instances, the CAMA centers will be situated in Bell System Company exchanges, however, the CAMA center or the Independent company equivalent, in some areas will logically fall in an Independent exchange in which case the Independent company could center for adjacent Bell System or other Independenf exchanges.

Regardless of ownership, these CAMA centers are going to be established in great numbers during the next few years, and in the majority of cases they will be Bell owned and operated. Any Independent company operating in one of these CAMA areas will have to determine from the conditions involved whether or not its exchange will be included in the CAMA net work either initially or subsequently. Since there are several engineering approaches to this problem, with varying cost, service and revenue considerations, no simple set of rules can be established which will provide satisfactory answers. Accordingly each exchange or toll dialing network must be studied individually in order to evaluate existing local conditions and determine from this study the most economical type of operation required to meet service demands.

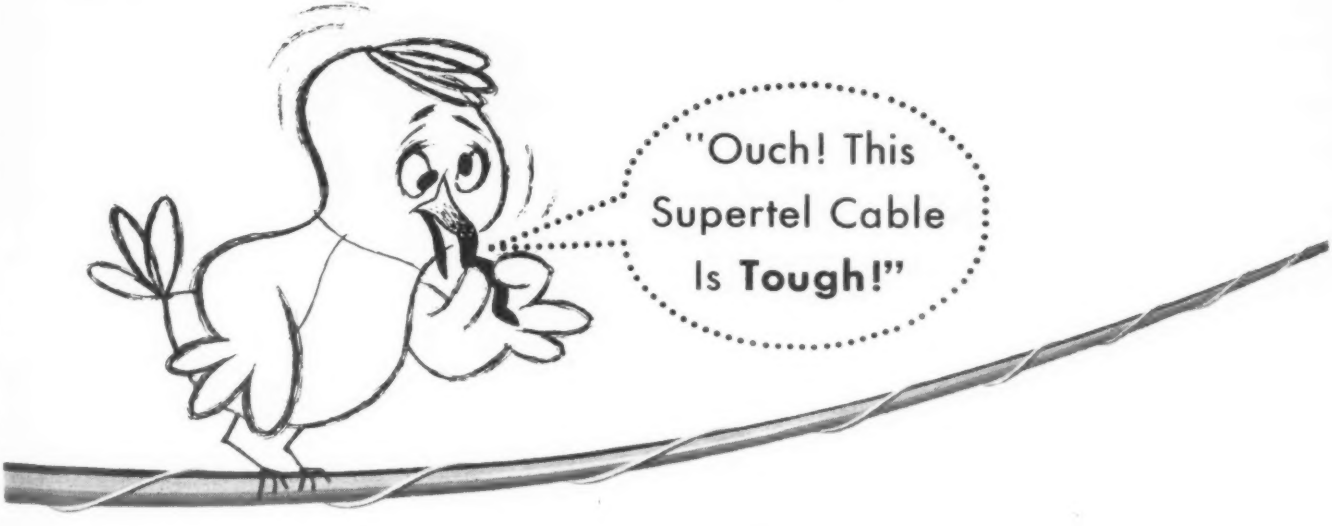
Until recently, a certain amount of confusion with respect to nationwide dialing was noted due to the lack of detail information on specific technical features and various other reasons. During the last two or three years, however, much of the earlier confusion and absence of desired information has, to a large extent, been stabilized. In view of this, it now appears possible and highly desirable for the Independent segment of the industry to take appropriate steps to determine the extent by which they will or will not participate in nationwide and/or limited area toll dialing programs.

The associated Bell System companies have established detail long-range plans for orderly progression toward their ultimate objectives and it seem essential that Independent companies also establish short and long-range plans based on their individual requirements.

Customer dialing of short-haul toll and multi-unit calls with automatic ticketing equipment of Independent manufacture is presently operating very successfully in several large and small limited networks. All of the Independent automatic toll ticketing systems presently operating in the Los Angeles area, as well as those presently in service in other parts of the country, are operating on a limited network basis via local completing switchtrains and require relatively few of the nationwide toll dialing features such as flash-busy and the like, and no time schedule has been established for adding the nationwide customer dialing facilities.

The possibilities for service improvement and increased economies in the limited network field of customer dialing should be explored, since there appears to be a large field of application for this service in the Independent industry. To satisfy the needs of this growing service, several types of short-

Automatic's pointers for plantmen and managers



Thermoplastic cable—as made by General Cable Corporation—*is* tough! Supertel Cable has a rugged polyethylene "hide" that's sunlight-resistant and fights moisture. It's "ornery" enough to stand up to roadside grease and oil too. But with *all* this—it's still lighter, and easier to handle. This means smaller and less experienced crews can string the cable faster and with lighter equipment —*and* with resultant "mark downs" in cost.

General Cable Corporation has been making telephone cable for over seventy years. They produce a top-quality, long-lasting thermoplastic cable which is available in standard sizes up to 404 pairs in 19, 22, and 24 AWG. Each conductor is insulated with polyethylene.

Getting Supertel Cable is very simple. Just order from your Automatic salesman or telephone the warehouse nearest you. Specify whether for aerial and duct, or for direct burial. Automatic's warehouses—which incidentally, *stock* over 2500 telephone supply items—are located in Kansas City, Chicago, Richmond, Johnson City, N. Y., and Portland, Ore.

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haul automatic ticketing systems have been developed by the Independent manufacturers for limited network application. This equipment provides appropriate facilities for making significant progress in this phase of customer dialing, and in addition, can often be accomplished at a substantially lower initial cost than would be required to meet the requirements for distant dialing as contemplated by the Bell System.

There would appear to be little requirement either now or in the foreseeable future for many of the nationwide customer dialing features in many of the medium to small Independent exchanges. In view of this, efforts should be directed toward establishing limited network operator and customer toll dialing wherever these systems will provide economical operation and leave detailed plans for expansion to nationwide customer dialing to be determined by future developments.

To the extent of being economically practicable, any toll dialing or automatic toll ticketing equipment provided should be technically compatible with the Bell System requirements, and when converting from manual to dial or replacing or adding to existing dial offices, the proper types of equipment can usually be provided at no additional cost. The engineering approach should be to include this equipment whenever possible to avoid possible major expenditures at some future date. Toll switchboards having trunk access to the nationwide toll dialing network should be modified to meet the requirements specified for operator toll dialing.

In reviewing the problem of providing toll dialing equipment in an exchange, the best engineering approach consists of the planning engineer becoming thoroughly acquainted with the fundamental system requirements and then, through consultation with his associated Bell operating company, determining how the exchange and toll trunking must be arranged for operation within the toll switching and area numbering plan. In most instances, a thorough knowledge of toll dialing technical features, transmission design, traffic and trunking arrangements is required, and if personnel with these qualifications are not available, engineering assistance from an equipment manufacturer should be obtained. Engineers capable of determining the most economical and best technical arrangements are available in only a few of the large Independent companies. Of necessity, therefore, the smaller companies must depend on the equipment manufacturers to determine requirements and provide equipment compatible with the network involved and, in most instances, they will also have to provide the equipment installers and technical help necessary to test and cut the equipment in service.

Left to right: A. D. Shamberg of York, Pa.; K. B. Schotte of Kittaning, Pa.; A. C. Herbert of Harrisburg, Pa.; W. F. Miller of Des Moines, Ia., and Henry W. Roos of Chicago, Ill.

Preliminary activities usually begin with the preparation of a schematic toll equipment, transmission and trunking plan, applicable to the network involved, by the local Bell operating company. This schematic is generally prepared on the basis of Bell System's circuit techniques and equipment arranged as it would be if the Bell company were providing all of the toll dialing equipment. Certain portions of the equipment shown on the schematics may be provided by the Bell company and other portions must be provided by the Independent company.

For specific applications, the equipment required may be entirely new and in others, minor to extensive modifications of existing facilities or a combination of new and modifications of existing apparatus may be necessary in order to attain the essential end results. From this schematic key sheet, manufacturers' circuit engineers will be furnished with a means of determining the various types of equipment required for compatible operators.

Continuing with the discussion on Independent engineering approaches, it is my opinion that one of the most critical problems facing the Independent industry today is the shortage of trained technical personnel required to successfully engineer, install, test and maintain the new types of equipment being provided to meet the expanding communications industry.

Technical personnel must be trained in the use of many new and different types of toll trunk equipment not normally encountered in Independent exchanges and in many cases, new even to Bell operating companies. The Bell companies are presently experiencing the situation that their toll maintenance personnel are not always adequately trained in the techniques incident to the testing and maintaining intertoll dial equipment as illustrated in the following quotation from a recent Bell Company Intertoll Minutes of Conference:

"With the advent of intertoll dialing, it has become increasingly apparent that a course of training is needed on pulsing. Supervisors and craftsmen, who in the past were interested primarily in ringdown or manual toll facilities will be confronted with the routining and clearing of pulsing failures on complicated dial facilities."

When compared to the types of dial equipment normally found in the Independent field, the equipment components required for operator and customer toll dialing are found to be quite complex. As a direct result, the grades of equipment maintenance must be greatly improved to meet the requirements of intertoll dialing.

As automatic toll ticketing systems, keysenders, multi-frequency senders, carrier pulsing and other highly technical and complicated types of equipment are introduced into plant, both the manufacturers and the operating companies will be hard pressed for the trained technical personnel required to engineer, install and maintain these new types of facilities. Many practices have been issued by the Bell System related to both educational and specific aspects of these new maintenance techniques, but few ever reach the Independent field. The resulting small number of appropriate practices available to the Independent industry must, of necessity, be modified to take into account the functional characteristics of the particular Independent manufacturers equipment at hand.

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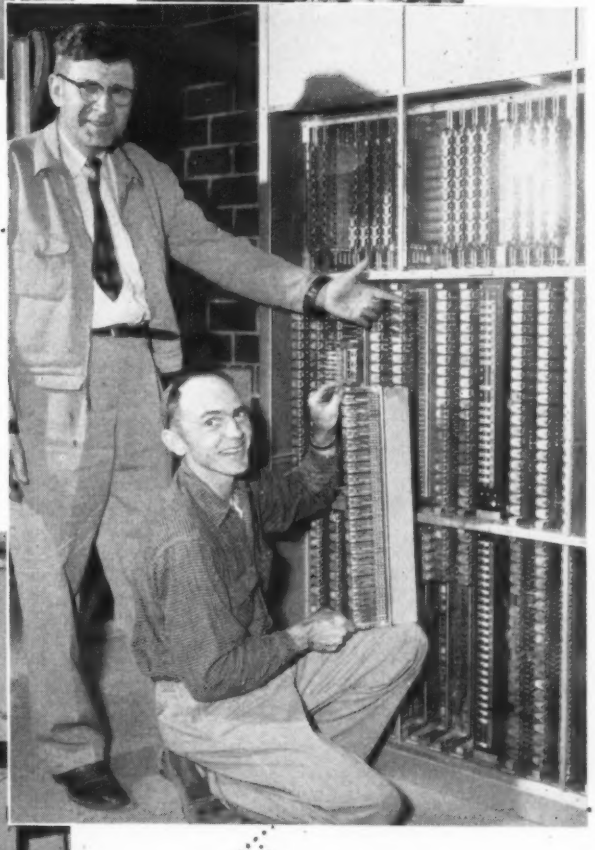
SYSTEMS _



TOP: *Fouke, Arkansas—Southwest Arkansas Telephone Cooperative*

CENTER: *Rice, Minnesota—Benton Co-op Telephone Company*

LEFT: *Chewelah, Washington—General Telephone Company of the Northwest*

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GENERAL SYSTEM

Report of USITA Traffic Committee

By E. T. BURGESS
Chairman

THE TRAFFIC COMMITTEE has as its purpose the consideration of general problems pertaining to traffic and particularly the improvement and standardization of traffic operations of Independent companies.

Many of the Independent companies experienced for the first time during the year 1955 a prorate study and a toll separation study.

The objectives of the prorate study generally consisted of two parts. The first part covered the methods used to determine the book cost of Independent company toll line plant used in handling interchanged message toll telephone business. The book cost data was set up on two bases in order to meet the objectives of the study. In connection with the prorate weighing factor portion of the study the Bell System developed corresponding average book costs for their toll line plant used in handling the interchanged message toll business. The second part covered the methods of determining Independent company expenses associated with the Independent company's toll line facilities.

A separations study was made to determine the book costs and expenses assignable to the handling of message toll telephone business interchanged with Bell as contrasted to other Independent company operations, e.g., local exchange business and in some cases Independent company toll business.

The experience associated with these studies required the wisdom of all persons taking part, however, a successful conclusion will more than justify the time and effort spent.

The Independent companies in the state of Ohio were faced with an order from the public utilities commission tc appear for hearings on the concur-

(Please turn to page 137)

These four traffic men conducted a "Force Adjustment Panel Discussion" at the USITA convention Traffic Conference. Bottom, left to right: W. A. Pitbladdo of Rochester, N. Y.; R. E. Coffman of Marion, O.; and H. J. Kleinhammer of Bristol, Tenn. Upper right: F. C. Lickteig of Owosso, Mich.

Empathy of Management

By LYDIA R. MIELKE
Union Telephone Co.

(Traffic Conference Address)

EMPATHY was rather a foreign word to me. For some unknown reason I had not given it a definite place in my vocabulary. As I thought about it I recalled pausing one day to listen for a few minutes to a gentleman who was conducting a class in human relations—as he discussed the difference between sympathy and empathy. Sympathy, he analyzed, means feeling with — empathy means feeling into.

We sympathize with another when we suffer with him, when we feel with him—but an empathetic relationship is closer, we enter imaginatively into his life and feel it—as if it were our own. We stop being an outsider and become an insider.

Referring to the dictionary I found this meaning, "Imaginative projection of one's own consciousness into another being — especially sympathetic, understanding of other human beings"—and then, "The power to sense another's need and to want to help satisfy that need."

Just how great a part has empathy played in your life and mine in our work of dealing with people? Our everyday experiences in brief testify to the fact that empathy is one of our human potentials and that it can go far toward saving man from psychic isolation. We, in the supervisory field, must realize this in our work in developing leaders.

Empathy is all-embracing, needful in every department—a necessary ingredient in dealing with people—an enjoyable characteristic in the over-all assignment of working together—the key to good human relations. All that it conveys, all that it implies, is not new to us. Our objectives have always been to develop understanding, patience, knowledge and encouragement and to live the Golden Rule.

But I am not a psychologist—I am only a traffic supervisor. All that I have reviewed so far is primarily for the purpose of channeling your thinking empathetically as I review briefly a plan which we have zealously incorporated in our traffic department—a plan that can go far in the development of empathy within our working forces.

The plan is called "The Operator's Development Plan."

The plan and the designated use of the records were graciously presented to us by the Michigan Bell Telephone Co. thru conferences and visits to offices where the plan was in effect. We were greatly enthused about it all—because we believed there was a need for just such a plan in our company offices.

I know you will agree that a record of an operator's development is essential in any office, as service assistants and management cannot remember the needs, status and progress of each individual employe. It is of equal importance that there be a minimum of records requiring as little clerical time as possible. We believe the "Operator's Development Plan" is the answer. I would like to review this plan briefly because I believe you, too will find it most interesting.

The first step in the plan is the listing of the operators according to their experience and designating the frequency of observations for each (that is, one a week—one every other week—one a month, etc.). The operators are then divided into groups—balancing experience—and each group assigned to a service assistant who is given the full responsibility for helping them to find and meet their learning problems. This responsibility includes taking observations at the designated frequency, follow-up work, special reviews, covering instructions not included in initial training, service programs and new instructions — ticket checks and billing failures—on tickets returned from the accounting department, informal discussions and the building of a greater sense of accomplishment. And the wonderful part of it all is that the Record—an 8 inch x 11 inch card—carries sufficient space for all of these entries.

A card is prepared for each operator and filed in a binder and becomes the property of the individual service assistant. She alone makes entries—and shares access to the records only with her management.

How was the plan presented?

We first presented it to the chief operator giving her every opportunity to question or discuss every phase of the plan. We assisted her in preparing her assignment list. We then, together with the chief operator, presented it to the service assistants at an office conference so that all service assistants could participate in the discussion. Service assistants then took observations on one another and the group together analyzed the notations and planned and conducted the interviews.

Each service assistant was then given the list of operators assigned to her. Throughout the conference accuracy in recording work performances was stressed. Helpfulness, analyzing the cause of failures, putting the operator at ease, friendliness yet respectfully firm, confidence, encouraging discussion and the solution of problems were reviewed in detail.

The next step was to have each operator interviewed. This was done by the chief operator who outlined the plan — its purpose — its benefits — the results to be realized—all based on the desire to work together in a helpful and friendly constructive relationship.

A chart listing the service assistants and the operators assigned to each was then posted on the office bulletin board. The chief operator, together with each service assistant, then prepared a weekly schedule of observation and development work.

The plan was then ready to be placed in effect. Let me say here that preparation was unhurried. All assistance was given in helping service assistants to develop confidence and understanding, particularly in interviewing before actually launching the plan.

The service assistant is relieved from her regular division duties while taking an observation. The length of time of the observation can be based either on a certain number of calls or a time limit. Care must be taken that the observation is not too lengthy. You see, there is nothing secret about this plan. The operator involved always knows when one is being taken.

At the close of the observation the service assistant advises the operator she has completed the observation and will discuss it with her shortly. The service assistant then analyzes her notations. She evaluates the observation and tentatively decides one or two items that would be best for the operator to select for further training. She may enter the observation results on the operator's record card at this time—or do this later—she may discuss any point with the chief operator for clarification and best presentation procedure.

When she is ready for the interview she has the operator relieved from her position and then at a desk or table together they review the work performance. The operator reads the notes, she sees the card record—her good work and work failures — her work progress.

The service assistant encourages her to participate by asking leading questions always in a friendly and helpful manner. The best point in the operator's work is covered whenever the opportune moment arrives. This may be during any part of the discussion. The service assistant offers her assistance and together with the operator selects one or two items for training or review, the interview is then closed.

The operator may have the written notations of the observation—the S.A. first having detached the call details.

There is no time limit on the interviews. The S.A. governs this, keeping it at a minimum but never presenting a hurried manner.

Then there is the follow-up work—the special reviews—service programs —new instructions. All this becomes a part of the operators record. The chief operator and S.A. establish a closer relationship as they analyze work performances, plan weekday work schedules, discuss service programs, audit results periodically and study new instructions together, but most outstanding of all is the working together of the S.A. and the operator.

Left to right: E. J. Girard of Washington, D. C.; G. T. Scharffenberger and C. D. Manning, both of Chicago, Ill.

Now I know you all have questions but I believe you primarily would like to know:

(1) Do the S.A.'s like the plan? Very much—here are some actual comments.
   (a) "We like it because we believe we can accomplish more by concentrating on the development of a few rather than the over-all force.
   (b) "We like it because it gives us time to discuss the operator's work and to answer her questions.
   (c) "It adds a new worth to the S.A.'s job because it is a challenge to her ability to develop people and create in them a desire to do their best at all times.
   (d) "It makes us more understanding and concerned not only regarding the individual operator's needs but to our own. The operators learn to understand us in our work of assistance, and we in turn learn to know our operators.
   (e) "We like it because it makes our work so much more interesting. There is a more definite purpose in our jobs as we watch progress and results.

Left to right: M. P. Brown of Spartanburg, S. C., and Harry J. Huether Jr. of Lexington, Ky.

(2) Do operators like it? For the most part—very much. Here are some comments:
   (a) I like to know how I am doing and have a chance to talk things over.
   (b) I like the idea of going to one person for a clear discussion.
   (c) I like to see a record of my work and to find the causes for poor work so that I can improve.
   (d) I like it because all receive the same treatment.
   (e) I like it because I learn to know my service assistant better and to understand her part of the work and I think she understands me better too.

(3) What does management like about it?
   (a) We feel it develops better service assistants because the desire grows to increase job knowledge and to develop better trained operators.
   (b) It increases the S.A.'s skill, knowledge and understanding of people.
   (c) It creates a strong feeling of working together for high objectives.
   (d) It improves work results.
   (e) It provides us with a record of an operator's work — her progress.
   (f) It provides us with an opportunity to analyze work results of service assistants as well

(Please turn to page 138)

FACTS ABOUT Exide®
MANCHEX® TELEPHONE BATTERIES

TEN DAYS UNDER WATER... EQUIPMENT AND EXIDES DEFIED THE FLOOD!

IN 1952 THE CORNING DIAL EXCHANGE OF THE UNITED TELEPHONE COMPANY GOT IN THE PATH OF THE RAMPAGING MISSOURI. PUMPS FAILED—ALL EQUIPMENT WAS FLOODED FOR TEN DAYS! WHEN THE WATER RECEDED, THE 48-CELL EXIDE WAS CLEANED, CHARGED AND PUT BACK IN SERVICE—TO GUARANTEE POSITIVE OPERATION OF VITAL EQUIPMENT—TO FURNISH ADEQUATE RESERVE POWER! DURING AND AFTER EMERGENCIES, RUGGED DEPENDABLE EXIDES PROVE THAT THEY ARE ALWAYS YOUR BEST BATTERY BUY—

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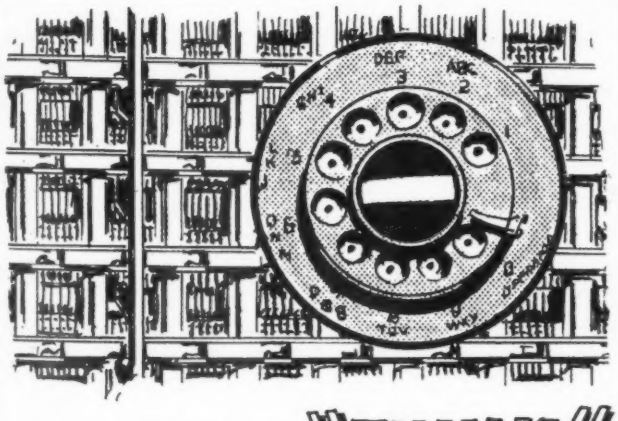
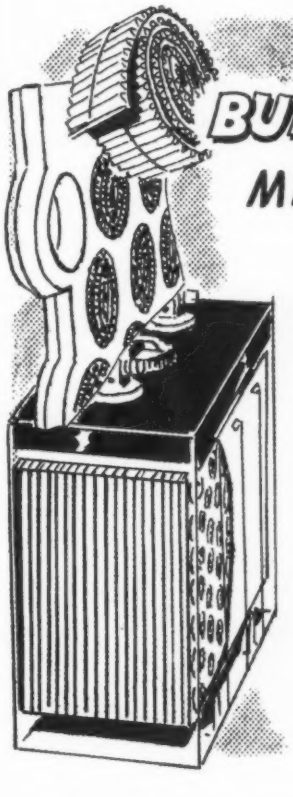


DIAL SYSTEMS "THINK" AND EXIDES HELP THEM DO IT!

AUTOMATIC SWITCHING DEMANDS A STANDBY SOURCE OF POWER TO INSURE SERVICE CONTINUITY. TO SUPPLY INSTANT, AMPLE POWER, EXIDE MAKES A COMPLETE LINE OF TELEPHONE BATTERIES—IN BOTH GLASS AND PLASTIC. BACK OF EACH EXIDE STANDS YEARS OF CONSTRUCTION SKILL AND ENGINEERING RESEARCH!



BUTTONS OF LEAD MEAN LESS COST FOR YOU

THE IMPROVED PLANTÉ TYPE POSITIVE PLATES OF THE EXIDE-MANCHEX BATTERY ARE OF THE MANCHESTER DESIGN—AN EXCLUSIVE EXIDE FEATURE. BUTTONS OF LEAD DELIVER THE POWER YOU NEED, WHEN YOU NEED IT. OVER A HALF CENTURY OF DEPENDABLE PERFORMANCE IN TELEPHONE BATTERY SERVICE HAS DEMONSTRATED THAT EXIDE BATTERIES WITH THEIR BUTTONS OF POWER ARE YOUR BEST POWER BUY—

AT ANY PRICE!

LET EXIDE HELP SOLVE YOUR TELEPHONE BATTERY PROBLEMS. ❶ CALL AN EXIDE SALES ENGINEER FOR FULL DETAILS. ❷ WRITE FOR FORM 4993, A TELEPHONE BATTERY ENGINEERING AND MAINTENANCE MANUAL.

Exide INDUSTRIAL DIVISION, The Electric Storage Battery Company, Philadelphia 2, Pa.

Report of USITA Commercial Committee

By K. L. LAWSON
Chairman

YOUR COMMERCIAL Committee has not undertaken any major projects during the year. However, it has underway a task which should be continued, providing the (USITA) board gives approval. That undertaking is the assembling and compilation of a set of standard or model forms used in the conduct of commercial operations.

There are many agreements and contracts which telephone companies must negotiate in the conduct of business. Many small companies fail to seek legal advice for the preparation of formal written agreements and are, therefore, deprived of any protection whatsoever against losses of various kinds. The preparation of forms is not only time consuming, but expensive, and it is believed that smaller companies especially can derive great benefit by having access to forms that are in actual use by Independent companies throughout the United States.

The committee notes with a great deal of satisfaction that its efforts to promote legislation making it a misdemeanor for a party line user to fail to give up a party line in a case of emergency is now bearing fruit. Quite a number of states have passed such legislation during the past year. In those states having such legislation, some prosecutions have taken place, and the resultant publicity given to these cases in the press has certainly been of great benefit to the telephone using public throughout the nation.

The strong emphasis now being placed on merchandising throughout the industry suggests that the committee should direct its attention to such phases of the subject as will be helpful and stimulating to member companies. Perhaps the committee can act as a clearing house in exchanging ideas that are practiced successfully by various companies. The art of communication is changing rapidly and this fact alone requires constant alertness on the part of everyone desiring to give customers the best in modern services.

* * *

Report of Committee on Liaison with Private Communication Systems

The principal activity of your committee is to maintain a close relationship between the Bell System and Independent companies in promoting full cooperation in mutual undertakings involving special communications services to right-of-way companies.

We are happy to report that there is every indication that our right-of-way customers have recognized the progress that has been made in this respect in the last two years and it has resulted in many expressions of appreciation on the part of right-of-way customers.

Your chairman was privileged to attend the annual convention of the Petroleum Industry Electrical Association and the Petroleum Electric Supply Association in Houston, Tex.

One of the highlights of this annual conference was the luncheon given by the AT&T Co. representatives and those of associated Bell companies in attendance at the convention. At this luncheon, everyone was given an opportunity to discuss his communication problems freely and frankly. Extending over the entire afternoon, this full discussion between representatives of the petroleum industry and both Bell and Independent companies developed some very helpful information, out of which was derived a better understanding of the problems of both the petroleum people and the common carriers. It can be reported that at this session a number of petroleum company communications men stated very frankly that the Independent companies are doing a much better job of fulfilling their obligation wherever involved in the furnishing of private line services.

It is your committee's recommendation that these very important customers of the telephone industry should be fostered in every way possible. In this connection, your committee recommends that all four members be permitted to attend the 1956 convention of the petroleum industry, as well as the annual gathering of the American Gas Association. Not only do these conferences afford an opportunity for Independent representatives to become well acquainted with communications people associated with private industry, but they also can exchange many ideas with Bell System people in attendance.

Independent company participation in the furnishing of service to right-of-way companies should be recognized as a responsibility with top priority. The field is expanding rapidly and points up the fact that the nature of communication requirements for many large concerns has expanded far beyond the confines of any one exchange area. Decentralization of industry as it expands in the years to come will only augment this situation. Certainly, everything within reason should be done to make meaningful the policy statement of the USITA issued in recent months.

The revenue potential of such service is staggering, and there is a certainty that the telephone industry will have to prove its ability to meet the requirements of the customers; otherwise, they will furnish the service themselves.

Your committee would also like to make the suggestion that one of its members be a representative of one of the southern Independent companies located adjacent to, if not within, the area of our large petroleum companies. This would afford the committee member the opportunity to work very closely with these customers throughout the area.

Toll Billing— 1955 style

Cuts billing time 45% for more than 200 telephone companies using the Recordak Toll Billing System.

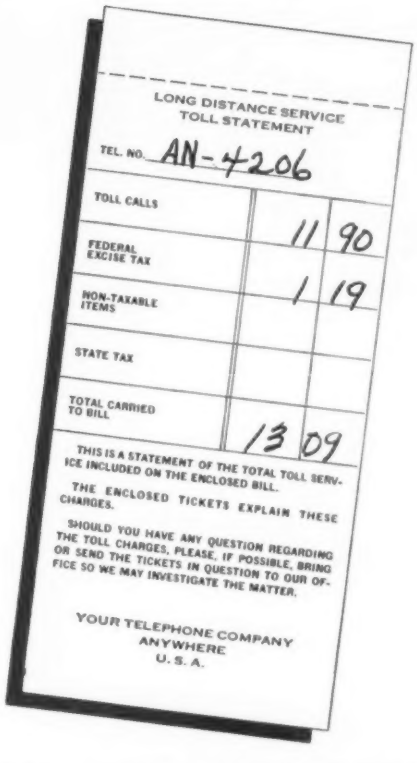
5 entries or less per bill

No matter how many toll calls a subscriber makes—the bill will look like this.

Just posting the totals does the trick because the toll tickets are microfilmed and sent out with the bill. Transcription of detail information from each toll ticket to bill is eliminated.

This cuts billing time 45% or more. Subscribers welcome the complete information provided by the original toll ticket for each call. The company retains a complete, compact photographic record of all bills rendered.

All you need is a Recordak Microfilmer which you can rent for as little as $17.50 per month; or buy for as little as $550. Write for detailed information and copies of actual case histories.



LONG DISTANCE SERVICE
TOLL STATEMENT

TEL. NO. AN-4206

TOLL CALLS	11	90
FEDERAL EXCISE TAX	1	19
NON-TAXABLE ITEMS		
STATE TAX		
TOTAL CARRIED TO BILL	13	09

THIS IS A STATEMENT OF THE TOTAL TOLL SERVICE INCLUDED ON THE ENCLOSED BILL.

THE ENCLOSED TICKETS EXPLAIN THESE CHARGES.

SHOULD YOU HAVE ANY QUESTION REGARDING THE TOLL CHARGES, PLEASE, IF POSSIBLE, BRING OR SEND THE TICKETS IN QUESTION TO OUR OFFICE SO WE MAY INVESTIGATE THE MATTER.

YOUR TELEPHONE COMPANY
ANYWHERE
U. S. A.

RECORDAK

(Subsidiary of Eastman Kodak Company)

originator of modern microfilming —and its application to telephone routines

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RECORDAK CORPORATION, (*Subsidiary of Eastman Kodak Company*)
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MAIL COUPON FOR FREE FOLDER

Please send folder describing Recordak Toll Billing System in detail.

Name_____ Position_____

Company_____

Street_____ City_____ State_____

Extended Area Service or Automatic Toll Ticketing

By T. A. SAUNDERS
Union Telephone Co.
Owosso, Mich.

(Commercial Conference Address)

THE MANAGEMENT of progressive Independent telephone companies today have many objectives they are trying to attain. Generally speaking, the two main objectives are: First, to meet the service needs and demands of the areas served. This means serving all the people in the area who want service, and it also means giving them the type and quality of service they desire.

The second main objective of management is to keep the cost of service as low as possible to earn an adequate return for its stockholders in the process of providing this service to its customers. This means, of course, that management must be cost conscious, and must take advantage of every opportunity to reduce operating costs, or to minimize or offset the effect of increased costs.

Hard work on these and other objectives by our industry in the past has made telephone service the outstanding bargain in communications that it is today. We must keep it that way.

One development in the industry which apparently will aid management in attaining both of these objectives is "customer toll dialing" with the use of automatic toll ticketing equipment. It offers a decided improvement to the customer in the speed and convenience of handling his long distance messages, and has had tremendous appeal to the customer wherever it has been offered. Cost wise, this new development offers a strong probability of substantial reduction in operating costs, or, at the least, the opportunity to stabilize costs of handling long distance business at reasonable levels.

All companies cannot immediately offer customer toll dialing in the exchanges they operate. A number of steps must be taken first by the Independent company involved and by the Bell System companies before full nationwide customer toll dialing can be offered in a specific location.

The steps that need to be taken first are the following:

(1) The exchange involved must be automatic in order to participate.

(2) The universal 2-5 numbering system must be in effect.

(3) The exchange must have access to a toll switching center. Almost all of these centers are to be provided by the Bell System companies.

(4) Long distance circuits must be regrouped, and in a majority of cases, must be recentered and the number of circuits increased. It is also usually necessary to establish alternate routes to some points. All or part of this work must be performed by the Bell System companies.

(5) The exchange involved must have access to automatic toll ticketing equipment.

The over-all plan of customer toll dialing for this country and Canada was conceived and developed by the Bell System and provision for the Independent companies was included in their planning. The manufacturers for the Independent telephone industry were very quick to develop or adapt ticketing equipment and switching equipment for use with customer toll dialing. As a result, it is possible to offer customer toll dialing on a limited basis between two or more automatic exchanges, even though full customer toll dialing on a nationwide basis is not possible at this time.

A further result of these developments is the possibility of using them as an aid in solving one of the other serious problems of our industry—"The Extended Area Service Problem."

During the postwar period, it has been one of the chronic problems of our industry and is so familiar to all of you that I will only take a moment to refresh your memory as to the factors that make it the problem it is. Extended area service as a definite appeal to our customers because of the speed and convenience of making calls to nearby points without the delays involved in placing the call through a long distance operator. This type of service also has some appeal to management due to the opportunity it offers to stabilize *the increasing costs of manually ticketing and timing short-haul toll messages.*

While the service has desirable features as far as management is concerned, there are usually many difficulties to be overcome before the service can be provided. The chief ones are as follows:

(1) Extended area service is usually practical only between two automatic exchanges.

(2) Providing the service results in a stimulation of 400 to 500 per cent or more in the number of messages between the two points. (More about this later, it's important.)

(3) Meeting this stimulation requires *additional* circuits between the two points, special terminating equipment and switching equipment to handle the traffic.

(4) Elimination of the toll charge results in a loss in revenue.

(5) It is difficult to get exchange rates adjusted equitably to offset the loss of toll revenue and to meet the increases in annual charges due to increased investment in circuits and equipment. Rates are too often limited by pre-established rate brackets based on the number of stations which can be called without a toll charge.

The difficulties I have listed above are serious ones, but I assure you they are all increased, compounded, and multiplied when two different telephone companies own the exchanges involved. I don't believe it is necessary to say more.

Cashiering and Bookkeeping Functions Combined in New Customer Service Counter

Its friendly appearance contributes to pleasant customer relations and provides the convenience of a sectional, easily moved counter. Two-drawer Steel Files, Safe-Files®, or Typewriter-Desk pedestals may be combined to form a functional work station. The cashier always faces front . . . therefore the customer gets immediate attention and transacts business quickly and comfortably. A continuous parcel shelf permits the customer just served to move aside for the next in line. Two or more units may be easily combined to provide the required number of work stations. *Certified*, insulated units installed in the counter provide 24-hour, point-of-use protection against fire for valuable records. Circle SC246 for detailed folder.

New Aristocrat Desk . . . Masterpiece of Engineering

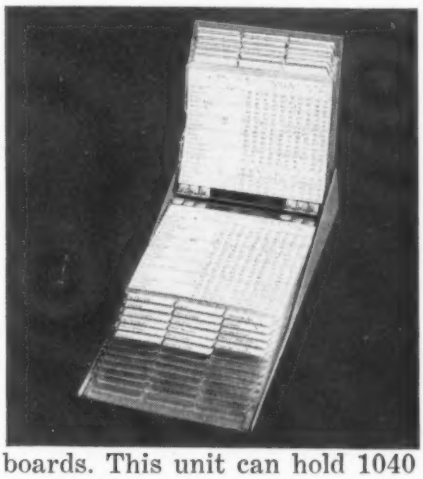
This new Aristocrat line of steel desks sets new highs in functional excellence, durability and beauty of modern styling. The overhang top is ideal for customer contacts in the commercial office. Tops, drawers and pedestals can be easily reassembled to meet varying requirements. Heights adjust from 29″ to 30½″. Available in exclusive Gray-Rite, and soft pastel brown or green. Circle FF187 for new booklet showing the full line.

New Multi-Card Bulletin Unit Cuts Circuit Holding Time

The Remington Rand Speedac Multi-Card Bulletin Holder Unit, Model 9966 is a KEYSHELF DIRECTORY UNIT designed expressly for fast reference to rate and route information at switchboard stations.

This complete information, now available at the flip of a pocket, enables the operator to handle many long distance calls with greater speed and accuracy than by trunking to another source.

A similar directory, the Speedac Chaindex Reference Unit, Model 9940.2 has been developed for use at PBX switchboards. This unit can hold 1040 frequently called outside numbers and can't help but improve the quality of any company's external telephone communications.



For more details, circle KD767.

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SC246 FF187 KD767

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Title_____

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City_____ Zone____ State_____

Tel-8

Profit-Building **IDEAS** For Business

Left to right: J. C. Bartlett of Pawtucket, R. I.; J. W. Berry of Dayton, Ohio; Gustav Hirsch, Milton Staub and Jere Cave, all of Columbus, O.

This then leads us to a direct point-by-point comparison between extended area service on one side, with direct customer dialing, using automatic toll ticketing equipment, on the other.

First, a comparison from the standpoint of service to the customer. Think about it for a moment. If an access code is needed, it would probably be needed on either basis. A subscriber identifying code is required by some types of toll ticketing equipment to determine the calling station and on other types of equipment it is not required to be furnished by the customer.

In general, the customer can receive about the same speed and convenience of service by either EAS or with automatic toll ticketing.

The second comparison from the customers' standpoint relates to the method of payment; for extended area service payment is on a flat rate basis, while automatic toll ticketing would continue the charge per message. There are good arguments for either method. Most of us could make an effective case for either method.

We all will agree that an *adequate* flat rate for extended area service is difficult to attain, and certainly cannot be attained in most cases without the delay and expense of a hearing before a public service commission or other regulatory body. That's one strike against it. One factor in its favor is a lower cost of applying a flat rate. However, punched card accounting equipment, working with automatic toll ticketing equipment, will reduce the cost of billing the customer on a message basis to a fraction of a cent per message. It should be remembered that we have other toll messages to bill to our customers, so we can't give too much weight to this factor. Our costs of billing other toll messages will go up per message if we eliminate a major part of the volume.

On the other side of the picture, much can be said about the fairness of charging our customers for a service according to the use they make of it. This makes an impressive argument to our customers. Measured service rates in the larger cities accept this principle and carry on the tradition of a charge per message. One important advantage of a "charge per message" is that it requires only the continuance of an existing rate.

Where extended area service has been introduced, much ado has been made of converting so-called "unstable toll revenue" to "stable revenue." Perhaps our toll revenue is unstable, but if it is, so is our exchange revenue. I believe they are both directly related to our general economy and that we must expect each of them to follow the general economic trends of our country. The only factor, in my opinion, which tends to make short-haul toll business undesirable is *"the steadily increasing cost of handling it on a manual basis."*

The next comparison pertains to the relative cost of furnishing each type of service. It is necessary to study each situation on an individual basis before relative costs can be determined. In general, automatic toll ticketing equipment makes it possible to handle short-haul toll on a profitable basis with a reasonable volume of messages. However, it is recognized that many situations may not lend themselves to automatic toll ticketing. One such case might be between two small unattended automatic exchanges where the volume of messages is low and no other business could be routed through ticketers at either location.

Vivian Ryden of TELEPHONY and Harold B. McKay of San Francisco, Calif., author of popular technical articles published exclusively in TELEPHONY.

Perhaps the most important consideration insofar as costs are concerned relates to the factor of stimulation previously referred to. It is truly important.

If extended area service is to be established, a 500 per cent stimulation in message volume is considered to be near normal. This means that a substantial addition of trunks will be required as compared to a manual toll basis. Providing additional trunks requires a large additional investment, and meeting the annual charges on the additional investment requires further increases in exchange rates over and above the increase required to offset the loss of toll revenue.

The terminating equipment for these additional trunk circuits and an extended area switch train also requires an additional investment. In many cases, the stimulation achieved has been over 500 per cent and additional facilities have been required soon after the service was established. This requires even further additional investment with no corresponding increase in revenue to offset the cost of carrying the additional investment.

In considering costs on an automatic toll ticketing basis, we should analyze stimulation. It comes from two sources. First, a part of it is due to the speed of handling and convenience to the customer which is much the same with either automatic toll ticketing or extended area service. Second, in the case of EAS, a part of the stimulation is due to the elimination of the toll charge which would be retained with automatic toll ticketing.

Thus, stimulation with an automatic toll ticketing arrangement should be somewhat less than under EAS. It is believed that stimulation under automatic toll ticketing would average between 100 per cent and 200 per cent. If the route involved is a 10-cent one, the stimulation would be near the 200 per cent figure and if a 20-cent route is involved, stimulation would be closer to 100 per cent. The experience of companies who have made short haul ticketing installations tends to support these figures. Actually, with automatic toll ticketing, the degree of stimulation

(Please turn to page 139)

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TYPE 177

6 PAIR #19 AWG SOLID

PWC Type 177 Rural Distribution Wire provides an economical and reliable method of extending rural line service to your customers. The six pairs of #19 Solid Copper Conductors are insulated with high dielectric polyethylene and individually jacketed with a tough weather resistant vinyl compound. All pairs are fully color coded for immediate identification. Each pair is accurately and individually twisted to minimize cross-talk.

The assembly of pairs is cabled around an extra high strength #109E steel messenger (breaking strength 1800#) that is insulated with black polyethylene compound.

The economical features of initial cost and installation have made this product very popular throughout the telephone industry.

Write today for Installation Practice Bulletin #102 and information concerning both Type 177 and the 16 Pair #19 Type 178 Wire.

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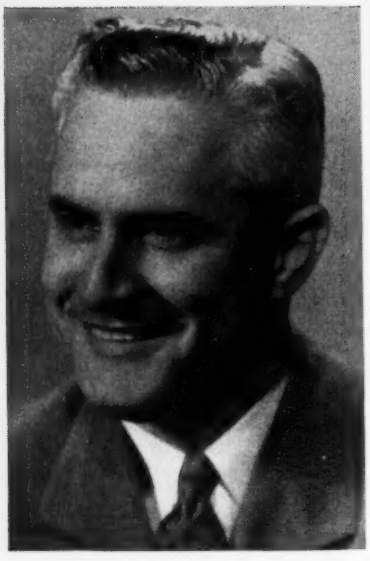


Hawaii

Its Communications and Business Office Service

By WILLIAM C. KEA
Hawaiian Telephone Co.

(Commercial Conference Address)

ALOHA! Aloha is a very popular expression of friendship used in Hawaii, both as a greeting and in saying farewell. So it's ALOHA from the Hawaiian Telephone Co.

I would like to introduce my talk by getting you oriented to the Hawaiian Islands and some of the conditions under which we provide telephone services, by showing you a few slides.

Slide of Pacific Ocean. This is a slide of the Pacific Ocean showing distances from Hawaii to other parts of the world. We are:

2,000 miles from the West Coast of the United States.
3,400 miles from Japan.
4,800 miles from the Philippines.
4,200 miles from Chicago.

All telephone and telegraph communications between the Hawaiian Islands and the mainland and to other countries are by radio. We have 14 telephone channels, which are provided in conjunction with AT&T. Last year we handled 150,000 calls. In early 1958 there will be a submarine telephone cable between Hawaii and the mainland. We will be part-owners of this cable which will provide 36 voice channels.

Hawaiian Islands. There are eight islands in the Hawaiian group—six of which are populated. We provide all of the commercial communications on and between the Islands.

The population totals 501,000 and we have 139,000 telephones—99.1 per cent of which are dial, which makes us fourth in number of stations among Independent companies. Next year we will be 100 per cent dial. We provide inter-island radio-telephone service and have a total of 33 voice channels and 68 teletype channels. Last year there were 289,000 inter-island calls.

Oahu. . . . Oahu (is) the principal island on which Honolulu is located. Honolulu is our largest city and capital. Oahu is 604 square miles in area and has a population of 351,000. There are 111,000 telephones on the island.

Pearl Harbor is also located on this island, which I am sure you have all heard of.

City of Honolulu. Honolulu (is) on the Island of Oahu. Its population is 252,000 with 94,700 telephones. . . .

Bar Graph of Industry. This graph summarizes the ways by which Hawaii earns its living. . . . our greatest source of income is from the federal government, which includes the military and federal employes; sugar is next, followed by pineapple. Military expenditures alone totaled 237 million dollars during 1954.

Pearl Harbor. Pearl Harbor (is) headquarters of the commander-in-chief in the Pacific area. It is seven miles from downtown Honolulu.

Schofield Barracks. Schofield (is) the home of the 25th division and for many years one of the largest army bases. It is on Oahu, about 18 miles from downtown Honolulu.

Sugar Cane Field. Sugar is produced on seven of the eight islands, with a total of 28 sugar plantations. The islands grow about one-quarter of all the sugar produced in the United States and provide employment for 21,000 people. The plantations use mobile radio for control of their field operations.

Pineapple Field. Pineapples are grown on all but one island. About 10,000 people are employed on a year-round basis. Again, mobile radio is used in this industry.

Honolulu Airport. Honolulu International Airport, during 1954 (had) a total of 7,462 flights, transporting 182,000 passengers to and from the islands. All passenger travel between islands is by air. Last year there was a total of 44,779 flights, transporting 565,466 passengers. While at the airport I'd like to show you something which we think is unique.

Colored Paystation. We are painting our paystations different colors and are getting good revenue results. We have 1,130 public paystations and 515 semi-public paystations.

Lurline. The luxury liner Lurline makes round trips to Honolulu every 10 days alternating between San Francisco and Los Angeles. It arrives in the morning and leaves in the afternoon of the same day. Its passenger capacity is 720. Last year it transported a total of 39,216 passengers between Honolulu and the mainland.

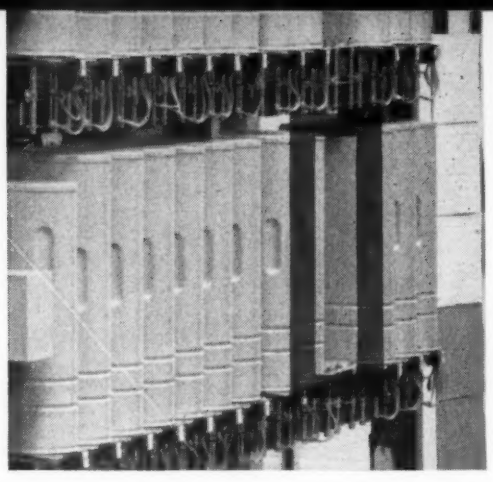
Waikiki Hotel. This is a picture of Waikiki, showing five principal hotels. There are 53 hotels in this area with a total capacity of 3,576 rooms. Other hotels are under construction and, in the next few years, we should have twice as many rooms. Last year there was a total of 91,287 visitors to the islands and it is estimated that they spent 49 million dollars. Estimates for 1955 indicate that we will have 106,000 visitors, spending 56 million dollars.

Public Office. This is a picture of our public office, with one of our service representatives waiting on a customer. We use what is termed the invisible representative plan, which utilizes but one person.

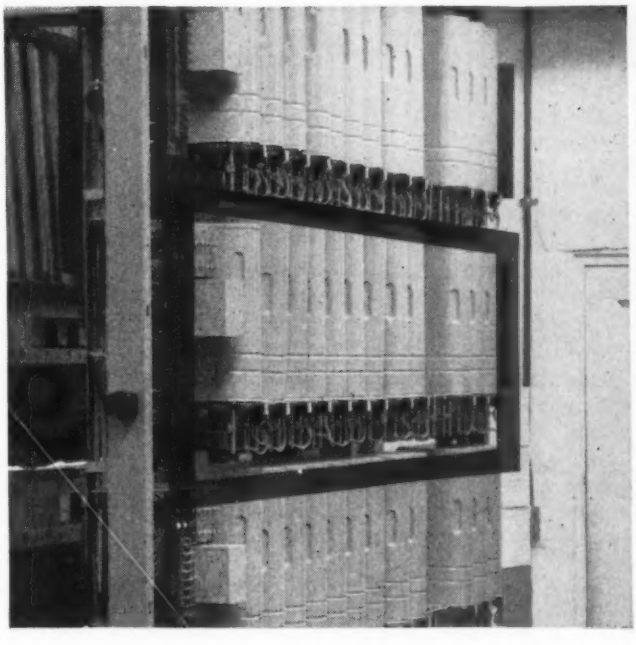
Record Office. Here is a general view of our record office where we have 41 service representatives, covering 28 record positions.

Close-Up of Service Representative at Work. Here is a record office posi-

(Please turn to page 78)



Add a Switch and you take care of moderate growth, quickly, easily. Just jack it into place on one of the numerous extra banks provided with your initial equipment. No wiring. No soldering!



Add a Shelf of switches when larger growth occurs. Each shelf is complete with pre-wired banks. Your men can install it quickly and inexpensively.

town . . . economically!

Add a Frame with as many shelves of switches as you need, to meet heavy growth. There are no capacity limits to Strowger expansion.

Why Gamble?

STROWGER AUTOMATIC
IS USED BY MORE

INDEPENDENT

TELEPHONE COMPANIES
THAN ANY OTHER SYSTEM

tion. We use tub files and average 2,900 accounts per position or about 2,000 per representative.

Service Representatives. Hawaii is referred to as the melting pot of the Pacific because of its many racial groups. Here we have six of our service representatives, each of different racial extractions.

Service Observer. Here is our service observer at work. She plays an important part in the control of our business office operations. Incidentally, her racial extractions are Chinese, Spanish, Portuguese, English, Irish, German and Scotch. She is married to a service engineer in our company who is Dutch, English, German, French, Scotch and Irish.

* * *

I would now like to discuss with you two very important managerial aspects of our business office operations in Honolulu. These are work volume measurements and service measurements.

Let me explain briefly what these two plans are. . . . The work volume measurement plan measures the relative volume of work handled from month to month in a given group. From this information the number of people required to do a good job can be determined. The service measurement plan measures the quality of the job being done in meeting the public face to face, by telephone or through correspondence.

We believe that these measurements provide us with controls which help materially to achieve the industry objective of giving the best possible service at reasonable costs. In line with this objective, I would like to repeat a statement appearing in a recent USITA member letter quoting *Saturday Review*, as follows:

"American industry now realizes that its relations with the public-at-large are as vital as its raw materials or its labor supply. Our leading corporations today are generally the ones that have demonstrated a sense of public responsibility. A reflection of this is seen not only in the increasing support of public education by many of our larger companies but in their institutional advertising. For industry today realizes that a product is judged not only by the claims made for it but by the standing of the company itself in the community."

If this statement applies to advertising, it surely applies to our business office service for there is no better means of advertising than a high quality of business office service. It is in the thousands of individual contacts which our representatives have with the all important rate-paying public that we, in commercial operations, have our greatest opportunity to build our company's standing in the community and demonstrate our sense of public responsibility. It is the purpose of this short talk, to review our experience in using several of the tools available to meet this opportunity.

Left to right: Fabian Bearden of Baird, Tex.; Bill Blewitt of Clifton, Tex.; E. C. Weitzell of Washington, D. C.; A. L. Hart and J. L. Rose, both of Kansas City, Mo., and E. W. Smart of Southern Pines, N. C.

Back in 1949, we learned that the Bell System was measuring their business office service, both as to quantity and quality. The idea seemed like a good one and we decided to investigate and find out what the plans could do for us in Hawaii. Taking into consideration our size and the costs involved, and after careful study, we decided to proceed on a trial basis. As we progressed, we found that the costs were not excessive—approximately 1½ per cent of our total 640 and 645 expense. In our opinion, the benefits far outweighed this expense. I will review some of these benefits in a moment, but first let me explain how we go about making the measurements.

Let's consider the service representative's job. Her work consists of numerous tasks which repeat themselves many times in the course of a day or week or month. The representative has bill stubs and orders to post, she has collection steps to take, she handles customer contacts, many involving service orders. Each of these work items can be assigned an average time required in performance. This average time might be considered par. To obtain an over-all estimate or theoretical time required to do the total job, we count the number of work items and multiply the totals by the average time required for each item. It is then possible to compare the total theoretical time with the actual time required to do the job, and from this, conclusions may be drawn as to performance.

Let's say the actual time agrees or comes close to the theoretical time. It can then be assumed that the work force is adequate. But if the actual hours far exceed the theoretical time required, it is a good indication that something is wrong with the work force. It may be necessary to reduce the size of the group or expand certain items of work so as to do a more thorough job.

On the other hand, it may be found that the actual hours are far less than the theoretical hours—again something is wrong. Probably too little time is being provided to do a good job. However, this seeming efficiency may be hurting the quality of service.

Some forms and a bit of know-how are needed—then after a few months the whole plan starts falling in place and the reports start coming in with comparative ease.

The work volume reports are particularly helpful in determining the size of a basic force, and, since payroll expense is a major portion of operating costs, it behooves us to have a sound basis for knowing the number of people required to do a good job. From these reports we have learned to program vacations, changes in routines, training and special work projects such as sales canvasses, and we can proceed with reasonable assurance that these things can be carried out without adversely affecting the all important service job. The work force can also be geared to anticipate seasonal variations in work load and special events such as directory closing and rate changes.

Now, a little about service measurement. These measurements require an accurate sampling of customer contacts by a service observer. In our company, this sample amounts to an average of 340 contacts per month, which is approximately 1½ per cent of the total. This sampling involves monitoring of telephone and public office contacts and a review of correspondence. All of these items are measured on the basis of their accuracy, their completeness and promptness of handling. If our people are making promises which they fail to keep, this is scored. If customers are

(Please turn to page 141)

Scientific tree care...

The Bartlett Tree Research Laboratories were established by the Bartlett Tree Expert Company in 1926 at Stamford, Connecticut. Here on a 200 acre experimental ground, ideas are tested and developed under actual growing conditions. There are indoor laboratories, too, for the study of insects and diseases which beset shade trees. In fact, it is a complete, down-to-earth laboratory for shade tree ills and ailments.

It is a place for Bartlett scientists to expand the research that already has initiated many innovations in tree care. One: the introduction of a complete, balanced, shade tree food fed through holes in the ground. Another: the successful control of one specific disease by use of chemicals introduced directly into the sap stream of the tree. Still another: developing an emergency sub-irrigation treatment with liquid food and conditioning chemicals introduced under high pressure.

This practical, scientific laboratory, in addition to its continual search for new ideas for the protection of shade trees, diagnoses the day-to-day problems encountered by our fieldmen. It is this that enables your Bartlett representative, with his knowledge of local conditions, to offer a service that is unique in the field of tree care. Call him today for a study of your tree situation. You will benefit by his recommendations.

REMEMBER

Our long experience in working with both utilities and the public is your assurance of dependable work and good customer relations.

The Bartlett Way

BARTLETT TREE EXPERTS

Home Office, Research Laboratories and Experimental Grounds, Stamford, Conn.
Local Offices from Maine to the Carolinas, and West to Indiana.
See your Local Telephone Directory for Local Address.

What are We Waiting for— Let's Sell our Service

By K. L. SCHROEDER
Telephone Services, Inc.
Chicago, Ill.

(Commercial Conference Address)

WHEN I WAS a boy on an Illinois farm my dad's main farming interest was the feeding of cattle and the raising and feeding of pure bred hogs. In those days, self-feeders came into popular use and dad was quick to see the advantages they afforded. Self-feeders, however, also had their disadvantages and my dad, good farmer that he was, was also alert to them.

There was for instance the disadvantage that some of the stock might be off feed or not eating regularly, even though the grain was available. I can remember that every day dad would look around to see that they were all eating and that everything was all right. In fact there was one old sow, that had produced many tons of pork, that became practically deaf in her old age and it was necessary to give her a special meal call by looking her up and rattling a pail or basket to attract her attention.

Livestock feeding and the telephone business have a great deal in common especially when it comes to selling our service. Many of us in the past have been content to have the customer come to our self-feeder, so to speak, and to partake of our services only that which he desired. True enough some companies are advertising and some are using personal solicitation to sell service but the majority of us are simply taking orders and not looking into the real needs of the customer and advising him accordingly. It's time we look around to see that our customers' communications needs are satisfied and time we start rattling the sales basket to attract more business.

Having passed from a sellers' market to a buyers' market, we have all seen examples of keen competition for the customer's dollar. Automobile dealers and appliance stores are stocked to the hilt with merchandise, and over TV and the radio we are besieged with pleasant sounding sales pitches.

The alarming note in this picture is the fact that figures comparing telephone service in use with other goods and services show that we are not holding our position with our sales competitors. Furthermore, a look at the financial statement should fully convince us of the need for more revenue stemming from a greater use of our services.

You will recall that in a recent issue of Fortnightly Telephone Engineer the editorial, titled, "The Customer's Buck," pointed to this disparity. For example, there are about 30 million TV sets in American homes, but only 27½ million residence main telephones. The sale of home freezers, automatic washers, and air conditioners exceeds the sale of residence extensions, and today, the number of two-car families is greater than the number of families with extension telephones.

This list of comparisons could be expanded many times over, but the somber truth is that something must be done to counteract this trend if we hope to earn a better share of the customer's favor, and get a better share of his purchases.

Obviously, our present sales methods are failing to reach the same competitive level as those employed by many of our rivals. For this reason, I would like to review with you some of the basic principles of selling. I hasten to add that these principles of selling are not new, but they are the tried and proven principles used by successful salesmen everywhere.

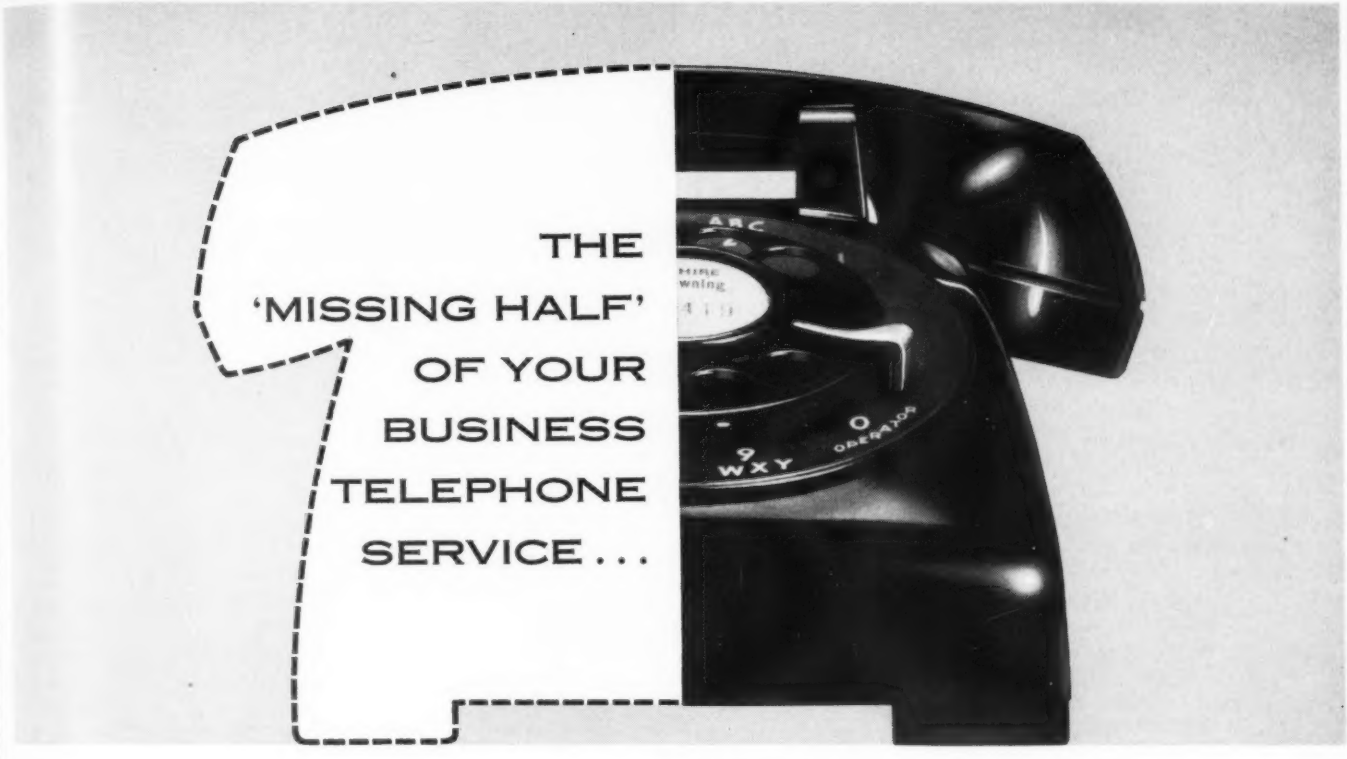
In presenting these principles to you, I do not infer that your sales efforts should be handled by full-time salesmen, devoting all of their time to sales, although I do believe that some of the larger companies could profitably employ such people. I recommend instead, that all employes having anything to do with the sale of service should be given some form of training or coaching in salesmanship to better equip them to intelligently present a sales talk that is geared to the customers needs, and one that will produce good results.

Such training is not lengthy or difficult. Actually, your entire sales program can be built upon the knowledge and use of the answers to two questions:

(1) How are sales made?
(2) Why do prospects buy?

The steps in making a sale and the order in which they must be taken are applied common sense: (1) Gain the prospect's attention; (2) develop his interest; (3) stimulate his desire, and (4) convince him to act.

Before approaching the customer, a plan should be made covering these four steps. Keep in mind that all creations of man began with a thought or idea, and it stands to reason that we must, therefore, have the power to create a market for a product or service. A thorough knowledge of the service you are selling, and of the prospect on whom you are calling are prerequisites to selling. This knowledge will enable the salesman to present a sales interview in a friendly, personal way that will gain and hold the prospect's interest. By means of planting ideas in the prospect's mind, you convey to him the full value of the service you are selling and lead him to the conclusion that he will gain by buying and lose if he does not buy. In selling telephone



CAN YIELD ADDED REVENUE FOR YOU!

Fast, efficient, flexible intercommunication is one of today's vital needs in every business — large and small. Personnel need it for time-and-step-saving contact with each other . . . management needs it for better administration and improved customer service.

Logically, this service should be an integral part of the regular telephone system. However, many business subscribers have been obliged to purchase private intercom systems outright from manufacturers. When that happens the telephone company loses the monthly revenue from the "missing half" of its service.

Connecticut PABX systems answer this business demand with a complete, integrated series of facilities sized to fit every possible intercom requirement. Because they cover such a wide range of needs so flexibly, Connecticut PABX systems open many new doors to added revenue for the telephone company.

With Connecticut equipment goes Connecticut experience in communications sales. A comprehensive, tested program that embraces (1) prospect selection, (2) the functional survey of subscriber needs, and (3) effective selling procedures, enables your company to introduce the new PABX services to the right prospects with maximum success.

Telephone Products Division

For the detailed story of Connecticut PABX equipment and the revenue-building Connecticut Plan, write now, without any obligation.

Connecticut **TELEPHONE & ELECTRIC CORP.**

Telephone Products Division

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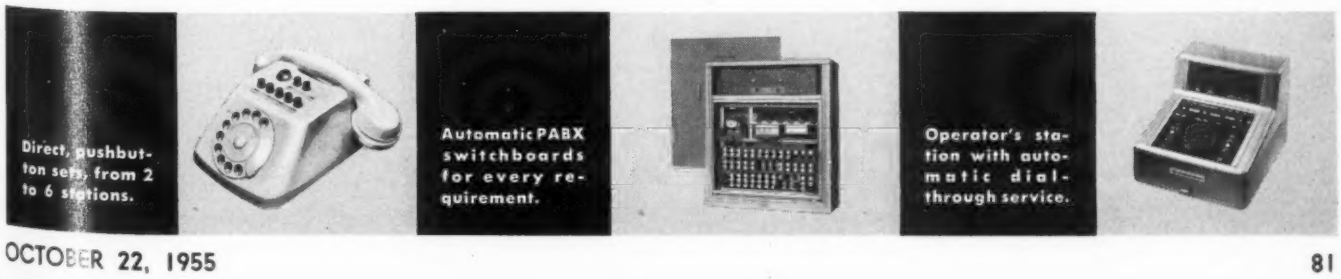

Direct, pushbutton sets, from 2 to 6 stations.
Automatic PABX switchboards for every requirement.
Operator's station with automatic dial-through service.

Left to right: H. H. Randall and J. M. Perkins, both of Muskegon, Mich.; Paul M. Henkels of Philadelphia, Pa.; W. J. Pfaender of Chicago, Ill., and E. G. Bellamy of Knoxville, Ia.

service, try to present a word picture that will show the prospect how the service will improve his wealth, contribute to his welfare, add to his peace of mind or enrich his happiness.

This brings us to the question "Why do prospects buy?" A prospect buys because of one or more of the followng reasons:

(1) He buys because he needs it.
(2) He buys because he can use it.
(3) He buys because it will add to his wealth or help him create wealth.
(4) He buys because it will satisfy his vanity.
(5) He buys because it will satisfy his desire for security.

Let us analyze these five reasons from the viewpoint of our industry and see how the telephone and its many related communication services fit into the every day scheme of business and social life.

Under the classification of things the prospect needs will be found, basically, food, clothing and shelter, but also many other things. Telephone service may fall in this basic category from the viewpoint of some prospects. We probably can attribute most of our walk-in sales to people who need our service. On the other hand, if you plan to explore this field for additional sales it would be well to stress the utilitarian angle rather than the beauty or convenience of the service. Impress upon the prospect the usefulness, dependability and low cost of the service, and convince him that he cannot afford to be without your service. Selling a person with impaired hearing an extension bell or a hard-of-hearing telephone, or selling a businessman PABX service when his business has expanded to warrant such service should not be too difficult.

The customer also buys because he can use the product or service as an aid to living, and in this field are a host of items: TV sets, automobiles, books, refrigerators and washing machines, to name a few. Here the prospect is buying because it will add to his enjoyment, his health and his happiness as well as that of his family. A sales pitch designed to sell the telephone as a means with which to add to the prospect's comfort, leisure, edification and safety should ring the cash register here. Here is the area, I believe, where our rivals for the customer's dollar are beating us to the draw. It is here that we should devote our best talents toward selling and this is the place to bring the whole family into the picture, because telephone service will benefit everyone.

Falling in the third group, those who buy to add to their wealth or to create wealth, we find such items as stocks, bonds and insurance as well as the machines and tools used in business and industry. Your dealings with this customer will for the most part, be confined to business people. Regardless of whether the business is large or small, we have a valuable and useful service to fill the needs. The best method of selling this prospect is to survey his business establishment and offer a personalized service designed to improve his communication system, while at the same time providing substantial savings or improvements for his business.

Left to right: Mrs. L. W. Snodgrass of Portsmouth, O.; Mrs. L. F. Roberts of Washington, D. C., and Mrs. G. T. Winn of Portsmouth, O.

Among the items purchased by the prospect to satisfy his vanity will be found clothing, jewelry, convertibles, colored bathroom and kitchen fixtures and colored handsets. I have placed clothing in this class for the second time for even though a man must have clothes there is the difference between need and vanity that causes him to buy a $125 suit instead of a pair of overalls. Put on your best selling manners and give vent to showmanship when you launch out in quest of colored handset sales and some of the other gadgetry of telephony. There are many opportunities for sales in this field, however, and it is not difficult to convince Mrs. Brown that she should keep up with Mrs. Jones.

The last group of buyers are those who buy to satisfy their security. For this reason people buy life insurance and it is also the reason that many salesmen are making a living selling cemetery lots. It is here that we can sell extension telephones to provide more security and aid the customer in summoning a policeman, the fire department or a doctor. Here also the prospect is concerned with the welfare, happiness and peace of mind of his family. In dealing with this prospect, the emphasis should be placed on what the service will do for the customer and the enjoyment, satisfaction, and high degree of safety it will afford him.

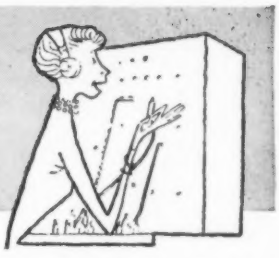
We have seen that telephone service fits into the life of every class of customer and that we really have a five star performer to sell.

Of necessity, my outline of the principles of selling has been brief. Many books have been written on the subject and they are readily available to those of you who wish to delve deeper into the art of selling. On the other hand, it is unlikely that you would want or expect to train the majority of your employes to become polished professional salesmen. I believe the best results will be obtained and the sales program will receive better acceptance by employes if sales training is simple and direct. Once the employe puts these basic selling principles to work and has made a few sales, the feeling of satisfaction and pride of his success will lead him on to greater effort. Yes, selling is fun and nothing is as successful as success itself.

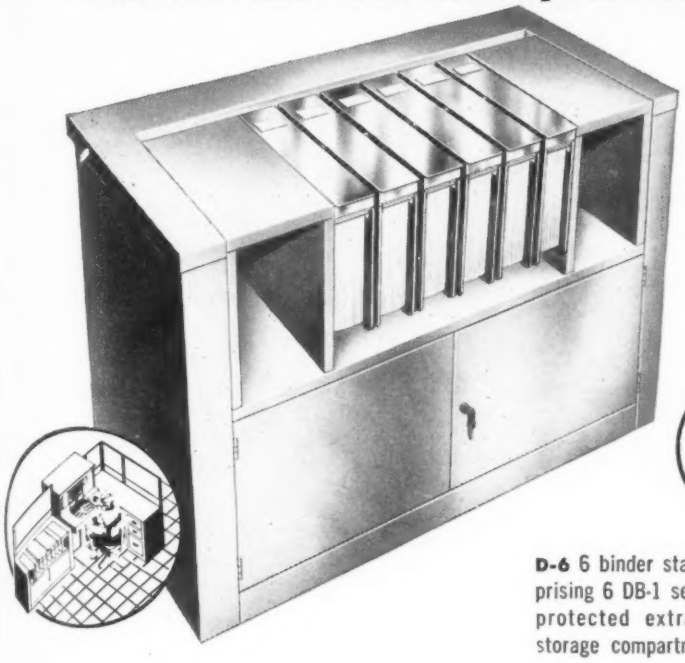
Up to this point we have been concerned with training the individual to make sales but equally important to the success of any sales program is the analysis of market potential, finding the person who needs your service and bringing new ideas and concepts into being.

Directoire

hello there!



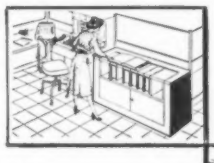
america's greatest directory—catalog and fast fact reference systematizer



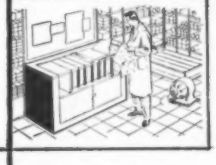
D-6
$135.00

D-6 6 binder stations—comprising 6 DB-1 sections—and protected extra spacious storage compartment.

A new concept in dimension in efficient office procedures that pays for itself...in convenience and savings!



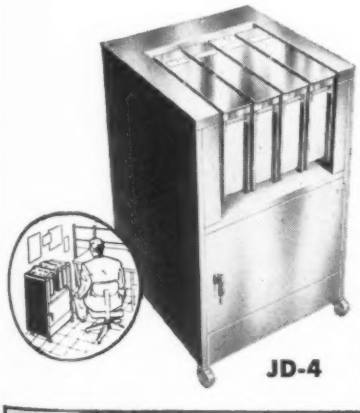
Perfect Telephonette Office.



Inventory, parts control, fast fact finding systems, catalog reference.

Buying offices, installations, time payments, credit, sales.

Home, study, library, organizations, executives.

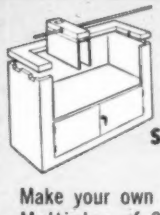


JD-4 Mobiler four (4) station **Directoire** for faster desk-side action Silent speed casters.

JD-4
$85.00

JD-4L – as above with letter drawer–**$88.50**

JD-4



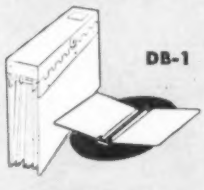
SCHEMATIC VIEW

Make your own arrangement. Multiples of 3 DB-2 for 2 DB-1 or vice versa.

Exclusive ring binder insert for single page supplements available.

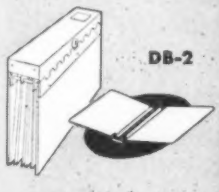
BINDER SECTIONS

Binders made of everlasting stainless steel and heavyweight masonite hinged leaves.



DB-1

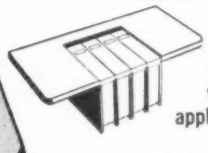
Inside Dimensions 9" h.–2½" w.–11¼" d.



DB-2

Inside Dimensions 9" h.–1⅜" w.–11¼" d.

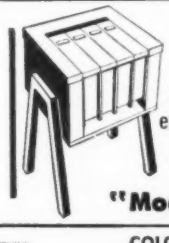
Other Models Available



For wall application.

W-4 – $74.95

"Wallster"



For the contemporary executive office.

M0-4 – $115.00

"Modernette"

For the modern styled office.

M-6 – $125.00

"Moderne"

For reception and fact centers.

FP-4 – $120.00

"4-Poster"

No.	Descriptions	Wt.	Price
D-6	6 stations (6 DB-1)	120	$135.00
D-9	9 stations (6 DB-1, 3 DB-2)	130	155.00
D-12	12 stations (6 DB-1, 6 DB-2)	145	200.00
D-15	15 stations (15 DB-2)	175	220.00

Higher on West Coast

COLOR DETAIL to match installations

Standard grey or green Decor finish —Frost Tan, Frost Green.

No.	Descriptions	Wt.	Price
JD-4	4 stations (4 DB-1)	50	$ 85.00
JD-4L	4 stations (4 DB-1) letter	53	88.50
JD-6	6 stations (6 DB-2)	55	100.00
JD-6L	6 stations (6 DB-2) letter	58	103.50

Write today for literature, Dept. T

Steelmaster • art steel co., inc.
170 w. 233rd st. n. y. 63, n. y.

Recently I made a study of eight companies in our system to determine the ratio of city, rural, extension, and PBX stations to total stations and to see what the trend has been in each class of stations over the last five years. On June 30, 1954, these eight companies had 214,381 telephones in service of which 69.7 per cent were city stations, 10.3 per cent were rural stations, 10.5 per cent were extension stations. and 9.5 per cent were PBX stations.

On June 30 of this year the same companies were serving 280,909 stations, 65.4 per cent being city stations, 12.1 per cent rural, 12.2 per cent extension, and 10.3 per cent were PBX stations.

Thus, it is seen that percentage wise rural telephones have increased by 1.8 per cent, extensions by 1.7 per cent and PBX stations by .8 per cent while city stations have declined 4.3 per cent. These figures show the results of an expanded rural construction program and the fulfilling of a pent up demand for extensions following the war, but they do not give us the clue to sales possibilities for which we are looking.

A second analysis revealed that the percentage of extension telephones by companies varied from a low of 5.4 per cent to a high of 14.6 per cent, and that PBX stations ranged from 1.7 per cent to 15.2 per cent. Quite a difference you will say. Yes, for here are sales possibilities. If extension stations in all of the companies were increased to the level of 14.6 per cent we would have 6,742 more stations in service and raising PBX stations to 15.2 per cent would produce another 13,765 stations in service.

Still seeking more information on extension sales possibilities, I decided to have a look at extension telephones on the basis of size of exchange. This study was made by selecting five average exchanges, in various states, in each of the following classes: (1) Under 500 stations; (2) 500 to 1,000 stations; (3) 1,000 to 2,500 stations; (4) 2,500 to 5,000 stations; (5) 5,000 to 10,000 stations, and (6) over 10,000 stations.

The results of this study are quite revealing. In exchanges under 500 stations only 4.1 per cent of stations are extensions; exchanges of 500 to 1,000 have 8.1 per cent extension. From 1,000 to 2,500 the percentage is 10.2 per cent, from 2,500 to 5,000 it is 12.4 per cent, from 5,000 to 10,000 it is 11.6 per cent and in exchanges over 10,000 stations the figure is 13.5 per cent.

Why are there fewer extension telephones, percentagewise, in the smaller exchanges and why is this difference so pronounced? These people live in the same kind of houses as their city cousins. In fact, most small community homes are considerably larger than those of the cliff dwelling apartment type in the city. Isn't the reason primarily because we have taken the small exchanges for granted and have not expended any real sales effort to broaden the market for extension telephones? I think there are unlimited possibilities for the sale of extension telephones in every exchange and particularly in those exchanges under 2,500 stations.

All of the companies in the Gary Group are actively engaged in sales work. They are uncovering sales in many ways. Some of the programs consist of inspections of all business and residence installations at which time additional service is suggested. Others are making telephone solicitations and at least one company is using full-time telephone salesmen.

I would like, however, to specifically cite the sales program of Illinois Telephone Co. which, under the direction of Jim Van de Vusse, Ben Schweitzer and Glen Arthington, has made an enviable record. Their over-all program includes an intensive toll promotion plan, patterned on the Bell System plan, together with a complete personalized sales campaign that is carried out in each district.

Their program has been going on for almost two years now, but here is a list of some of the services they sold in five months from March through July of this year: 414 extension telephones, 37 key-in-the-base telephones, 10 colored handsets, seven electronic secretaries, seven portable telephone installations, 98 extensions bells and gongs, nine PBX and PABX installations ranging up to 65 stations in size, 285 coiled cords and many keys, buzzers, subscriber transfer services, long cords, regrades and other services. I might add that PBX revenues were increased by 28 per cent as a result of their direct sales approach.

In setting up the sales program at Illinois Telephone Co., they first of all sent two men to Illinois Bell's five-day school on toll promotion. Upon their return these men held meetings in each district to train their people in all of the details of toll promotion. Following this, the company prepared sales portfolios containing descriptive literature, specifications and the rates on every item of telephone equipment they had to sell. Meetings were again held in each district to explain the use of the portfolio and outline a complete sales campaign. Records are kept of their progress and I am assured that everyone in the entire organization is enthused with the program and proud to be a contributing member of the team.

You will find your telephone supplier willing and happy to furnish all types of literature and brochures that will be needed to prepare sales portfolios. Examples of the help you can expect from this source appeared in recent ads of Automatic Electric sales Corp., one ad spotlighting a brochure on its new two-tone Monophone and the other being devoted to the sales portfolio I just mentioned, that was prepared by Illinois Telephone Co.

In the last few years, we have seen many new developments spring into being in our industry. Among them, the hands-free telephone, electronic secretaries and mobile telephone service. These items are bringing new and welcome sources of revenue to our industry, but aren't we overlooking some sales possibilities that are existent in our rural areas?

Today, on the average American farm, you will probably find two cars and a truck in the garage. The farmer will also have two or more tractors, a combine, corn picker, bailer and other up-to-date machines and tools including power saws and drills in the shop. He now pumps water by electricity and in the farm kitchen and laundry you will find the latest models of home appliances. Yet, on this same farm, you will probably find only one telephone.

Here is a tremendous market to be developed, but one that will require a new and determined sales approach. The farmer is a business man and as such I am sure that he can be shown that the value and usefulness of a complete communications service are well worth the cost of such service.

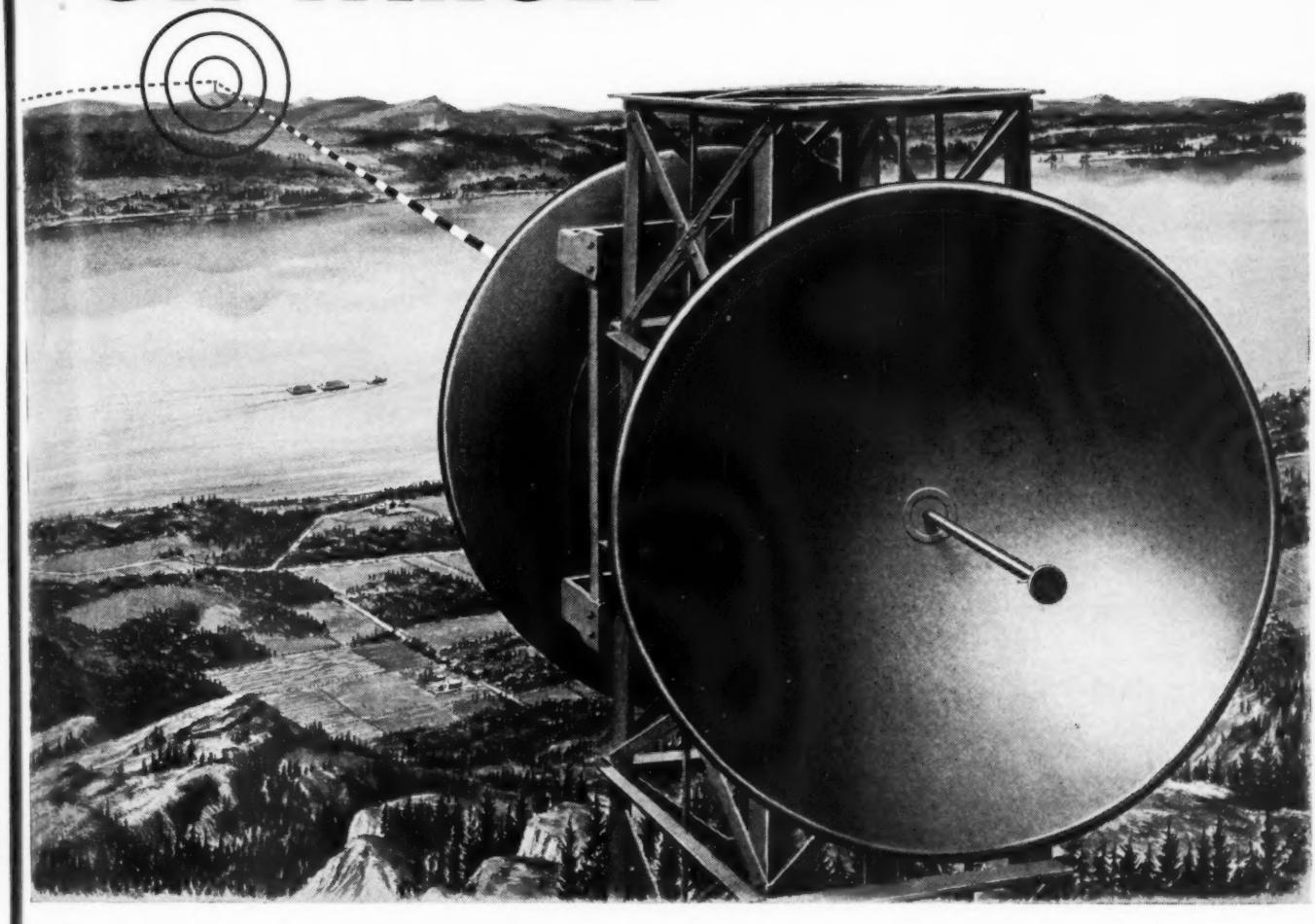
Perhaps this is where we need to try something new and different in selling. Perhaps that is why the Northwestern Bell Telephone Co. launched into a novel and revolutionary sales plan in central Iowa to modernize the farmers' concept of what rural telephone service should be.

This experiment was started about the first of August and will extend for a period of eight or nine months to cover most of the growing or busy seasons on the farm. Naturally, no appraisal of the results can be made at this time, but I want to tell you about the plan because it is a fresh and completely different approach to rural telephone development and one that should be of interest to all management people.

Here is the plan as it was outlined to me by Howard Amick, connecting company representative of Northwest-

(Please turn to page 142)

"ON TARGET"



. . . FOR ALL-INCLUSIVE, ALL-WEATHER COMMUNICATIONS THROUGH MICROWAVE

Microwave goes straight to the core of communications problems — with a simple solution! No costly wireline construction or maintenance . . . dish-like antennas beam the microwave signal between line-of-sight points separated by waterways, jungles, forests, or mountainous areas. Transmission is completely reliable, for it is *unaffected by weather.* Simultaneous, multichannel operation easily accommodates the volume and variety of communications so vital to modern business. For example, as many as 19 telegraph circuits can be carried by any *one* of the many telephone channels provided by the ISE system.

Microwave was successfully demonstrated for the first time in 1931 by International Telephone and Telegraph Corporation. Today this system, developed and improved through the years, is made available outside the United States through ISE, associate of IT&T. Would you like the facts on what microwave can mean to *your* communications? ISE engineers will be happy to consult with you.

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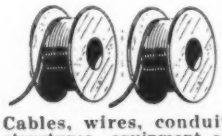

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Radio aids to air navigation . . . complete airport communications and lighting systems.

Teleprinters for automatic transmission and reception of written messages.

All equipment for television and radio broadcasting and receiving . . . point-to-point communication.

Report of USITA Accounting Committee

By O. M. WESTRUP
Chairman

CHANGES IN accounting requirements and matters relating thereto continue to engage the attention of the association's Accounting Committee. Systems of Accounts prescribed by regulatory commissions particularly the Federal Communications Commission come in for careful study and observation. Any change in the commission's rules must be examined carefully in order to determine the effect of such a change upon the operations of Independent telephone companies. Proposed rulings of the Treasury Department are likewise scrutinized in order to determine whether or not their adoption would adversely affect our companies' operations.

Annual Reporting Requirements

Early in the year, on Jan. 12, 1955, the Federal Communications Commission issued a notice of proposed rule making in docket number 11248. In this matter the commission proposed to revise its rules so as to exempt certain companies from annual reporting requirements. Specifically, it would have the effect of rescinding Statistical Circular No. 1, thereby exempting from the annual reporting requirements, all companies controlling directly or indirectly, a communications common carrier unless the annual operating revenues of such controlled carrier is in excess of 2.5 million dollars.

The Accounting Committee took the position that the proposed rule was meritorious since it would relieve some of our member companies of burdensome reporting to the commission. Accordingly, the association went on record as favoring the proposed change.

Accounting for Contributions

There has long been felt the necessity for a change in the system of accounts prescribed by the Federal Communications Commission for the treatment of contributions to and memberships in organizations engaged in activities beneficial to the community. This would include the American Red Cross, community chest, hospital, educational institutions, community welfare groups, and similar institutions.

Presently such amounts must be accounted for in Account 323—"Miscellaneous Income Charges"—thus indicating that the expenditures are not a telephone operating expense. We find that this change is not only desirable because it is better and more realistic accounting, but also because it tends to establish the fact that the expenditures should be included with operating expenses in proceedings before regulatory commissions.

Upon the advice and recommendation of the Accounting Committee, your association, on Feb. 21, 1955, addressed a letter to the Federal Communications Commission on the question of revising the system of accounts in the respect indicated. In advocating such a change it was pointed out that there had occurred, since the system of accounts was first prescribed, a change in the attitude of the public concerning the responsibility of corporations in connection with contributions of this type. Moreover, an increase in the degree of such responsibility has been the trend, particularly in recent years.

As a result, local fund raising organizations have come to rely heavily on corporations, including local telephone companies, for financial support and assistance. In fact, corporate contributions are, in most instances, essential to the success of the undertaking. Under those conditions the refusal of a local telephone company to cooperate could not be regarded as being in the best interest of either the community or the company. It follows, therefore, that corporate expenditures in the form of contributions are as much a necessity today as payments covering taxes, payrolls and purchase of materials, supplies, etc. It is our opinion, therefore, that such expenditures represent a necessary business expense and should be accounted for as such.

Our views on this matter are shared by the American Telephone & Telegraph Co. and its associated companies who likewise have petitioned the Federal Communications Commission for a change in the accounting rules.

Following our request, the Federal Communications Commission, on June 1, 1955, issued a notice of proposed rule making in docket number 11402. In this notice it set forth in detail the changes which had been requested both by the USITA and the American Telephone & Telegraph Co. Those changes may be summarized briefly as follows:

ACCOUNT 323 — MISCELLANEOUS INCOME CHARGES. Eliminate the following item—"Contributions for charitable or social or community welfare purposes."

ACCOUNT 675—OTHER EXPENSES. Add the following item—"Contributions to and payments for memberships in organizations engaged in activities beneficial to the community and organizations engaged in trade, technical and professional activities."

ACCOUNT 661 — EXECUTIVE DEPARTMENT; ACCOUNT 662—ACCOUNTING DEPARTMENT; ACCOUNT 663 — TREASURY DEPARTMENT; ACCOUNT 664—LAW DEPARTMENT; ACCOUNT 665—OTHER GENERAL OFFICE SALARIES AND EXPENSES. Revised to read as follows—"Membership fees and dues of officers and employes in organizations useful in the conduct of the activities of the department."

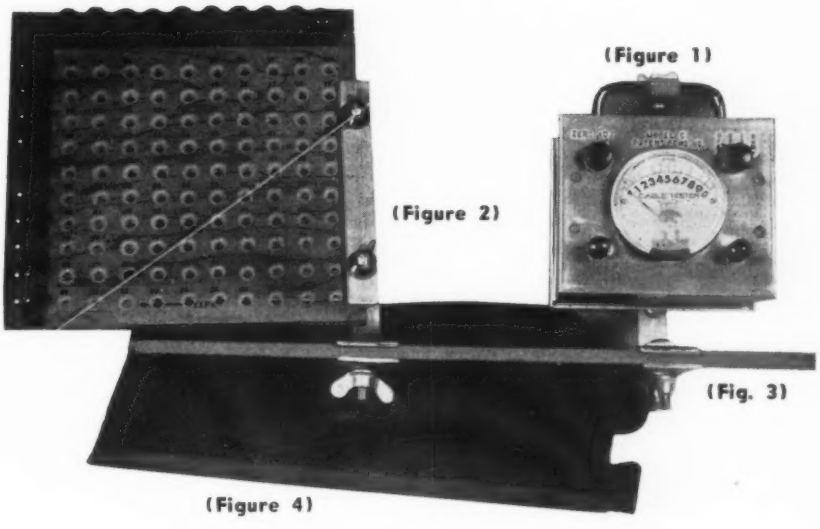
In inviting comments on the industry proposal, the commission also mentioned a variation of that proposal

THE Murphy (ONE MAN) CABLE TESTER

NEW IMPROVED 3000

Over ~~1800~~ of these TESTERS now in use in United States, Canada and Hawaii . . .

NOW! . . . for the first time, ONE MAN can test to identify cable pairs and do it three times as fast as two men could formerly do the same work. "ONE MAN" splicing crews are now a reality. On new cable work, labor costs are reduced by from 30% to 50% depending on just how far you are prepared to go in utilizing the ONE-MAN crew.



(Figure 1)

(Figure 2)

(Fig. 3)

(Figure 4)

NOW WE CAN HELP YOU:

1. **REDUCE cable splicing costs even more.**
2. **Make the splicers work EASIER.**
3. **Eliminate many troubles and delays caused by wrapping cableends.**
4. **Still further SPEED UP new cable splicing operations.**

MODEL C METER UNIT (Figure 1)

Three Test Sets in one — The Murphy ONE MAN Cable Pair Identifier, The Buzzer Continuity Tester — and the Ohmeter for locating trouble. Heavy, long-life battery with special bracket clamp to hold it in place. Can't shift, can't short out — can't leak.

COMBINATION TAG & TERMINATING BOARD

Figure 2 (Model TTB) — Automatically sorts and groups the wires just the way you need them for connecting to the binding posts of the Terminal Board — only, in this case, the Terminal Board is built right into the Tag Board. Complete Directions with each unit.

DUAL PURPOSE CLAMP (Figure 3)

This clamp will hold the Terminating Board at any angle, above or below the strand — for greater convenience and speed in boarding a cable. The clamp can be used to hold the present standard tagboard in position while using the earlier type of Terminal Board. The same DUAL PURPOSE CLAMP is also used to hold the METER UNIT above the strand, right over the splice, at any convenient angle, for the greatest visibility of meter face.

THE NEOPRENE BAG (Figure 4) Model NP

The bag is simply slipped over the Terminating Board and taped down around the cable armor to seal out the weather. Bag is made of U. S. Navy Spec. High Tear Nylon Fabric covered on both sides with a heavy coating of Neoprene. Can be used over and over hundreds of times.

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which would be to include the items in question in one expense account designed especially for that purpose or in Account 675—"Other Expenses." The announced purpose of this variation "making these items more readily available for study and analysis," would appear to be only one of several possible objections to our proposal.

The notice went on to suggest still another possibility for amendment. This suggestion would contemplate no change in the accounting for contributions except that Account 323—"Miscellaneous Income Charges"—would be credited with the reduction in federal and state income taxes attributable to the contribution. The offsetting charge would be to Account 305—"Operating Taxes." Finally, the notice stated that if the accounting regulations were revised so as to permit expense treatment of contributions, whether they be in one account or in the various accounts set forth in the industry proposal, what should be done if anything along the line of establishing a maximum limit on amounts or restrictions on the type of contributions which could be treated in this manner.

As to these matters the association stated its position in a letter addressed to the Federal Communications Commission on July 26, 1955. It stated that the detailed methods set forth in the notice which is the method suggested by the industry is the one that should be adopted by the commission.

This position is justified not only by the many reasons set forth in the association's original letter, but also because it is consistent with the accounting treatment of all other expense items. The association also went on to state why it was opposed to each of the alternate proposals described in the commission's notice of rule making.

A similar position was taken by the American Telephone & Telegraph Co., Western Union Telegraph Co., RCA Communications, and others. Comments in opposition to the proposed changes in the accounting for contributions and for membership dues were filed by the Communications Workers of America (CIO) and by several of our state regulatory commissions.

The Federal Communications Commission has not as yet issued a ruling on the matter. We are hopeful, however, that such a ruling, when it is issued, will favor the proposed changes.

Billing on Government Accounts

Some mention should be made of the report of the Hoover Commission Task Force on the subject of special billing required by the federal government for telephone service furnished to its agencies.

One of the features of the USITA convention Accounting Conference was a discussion and motion picture on "Electronics in Accounting and Business," by these two representatives of Arthur Andersen & Co.—A. J. Abbott (left) and B. A. Regione.

Listing such items as length of conversation, time and type of each toll message on invoice forms prescribed by the government is typical of such special billing requirements. Another matter is the requirement that unpaid balances be deleted from current invoices making it necessary to prepare special bills in each instance. The number of copies required likewise complicates the billing procedure. The work thus added means additional costs which must be passed on to the rate payers in general. The inequity of the matter has been brought to the attention of the Government Accounting Office which has been looking into the matter.

Along this line it was encouraging to note that the controller general, on Mar. 9, 1955, issued Systems Memorandum No. 38, eliminating thereby the necessity for certifying public utility bills as being "correct and just and that payment has not been received."

More recently, in a letter dated Sept. 6, the acting controller general authorized the substitution of toll tickets for the detailed statement of United States Government official toll service, Form SN 650 A, now required. This authorization will be of particular interest to those companies employing microfilming in their operations. The changes thus far approved indicate that the Government Accounting Office is proceeding in an orderly manner to correct and eliminate the existing unreasonable and unnecessary requirements. The association will continue its efforts to obtain relief from the costly and burdensome effects of these requirements.

Report for Excise Tax

Last year's report included a reference to the association's efforts to obtain a modification of the Treasury Department's Form 720 for reporting federal excise taxes. It was emphasized that Independent telephone companies would be faced with substantially increased costs if they were to be required to furnish the particulars called for in determining the net amount of taxable charges for each type of service subject to the tax.

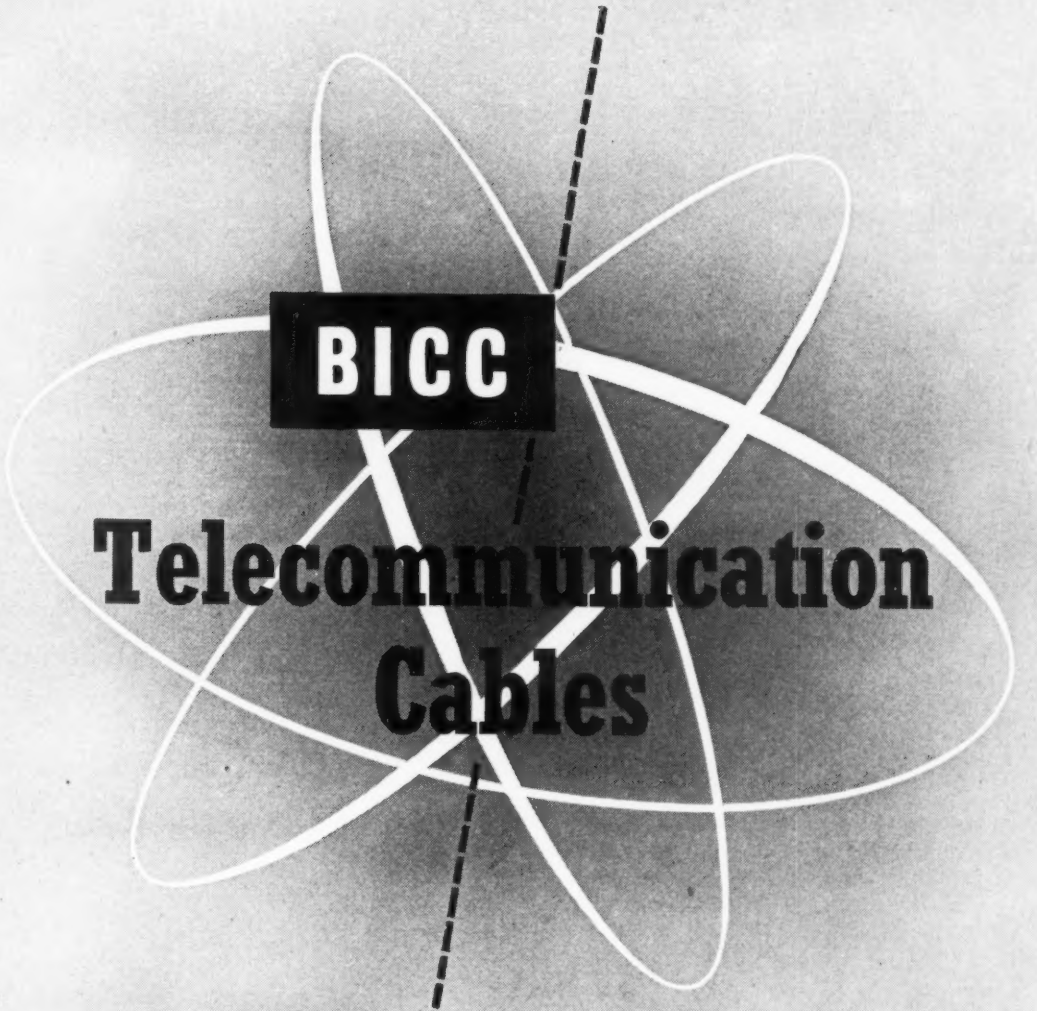
Although the forms have not as yet been revised, the Treasury Department has continued throughout the year 1955, its policy of accepting returns showing in Schedule B only the amount of tax called for in Column 6. We are still hopeful that the form will be redesigned in such manner as to eliminate the objectionable features indicated.

In any event, we hope that we have been successful in our efforts to convince the Treasury Department that we should be required to furnish no more information than the amount of tax now being provided in Column 6 of the return.

Accelerated Depreciation

It will be recalled that last year's accounting conference featured a timely presentation and discussion of the more important provisions of the Internal Revenue Code of 1954. Alternative methods for computing the amount of depreciation deduction for tax pur-

(Please turn to page 142)



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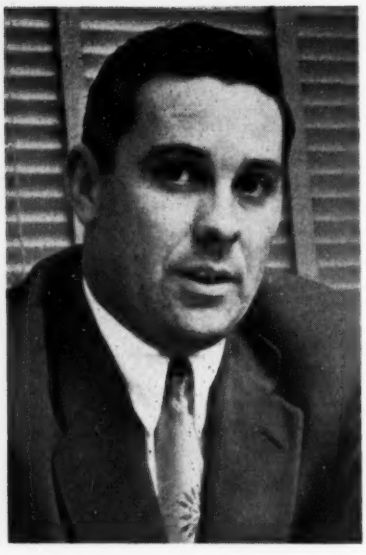

Continuing Property Records

What, Why and How

By RICHARD L. OHLSON
General Telephone Service Corp.

(Accounting Conference Address)

A "CONTINUING Property Record" can be defined as a group of records which permits the association of the appropriate original cost with the property units owned by a company. The "appropriate original cost" is defined as recognizing, among other things, location and year of installation. This set of records could be considered a detailed amplification of the plant ledger.

A more complete description of the continuing property record is contained in the following quotation from the FCC System of Accounts:

"The continuing property record shall be arranged in conformity with the plant accounts prescribed in this system of accounts. It shall be compiled on basis of original cost (or other book cost consistent with the provisions of this system of accounts). The record or records supplemental thereto shall contain such detailed description and classification of property-record units as will permit their ready identification and verification. They shall be maintained in such a manner as will meet the following basic objectives:

(1) An inventory of property-record units which may be readily spot-checked for proof of physical existence.

(2) The association of cost with such property-record units to assure accurate accounting for retirements.

(3) The determination of dates of installation and removal of plant retired to provide data for use in connection with depreciation studies.

The record or records supplemental thereto shall accordingly reveal clearly, in relation to designated accounting areas, detailed and systematically summarized information as to the kind, character, size, quantity, location, year of placement and retirement where practicable, ownership, and actual or apportioned original cost (or other appropriate book cost) of the telephone plant and other property-record units aggregately represented by the concurrent balances in accounts 100.1, 'Telephone plant in service,' 100.3, 'Property held for future telephone use,' and 103, 'Miscellaneous physical property.'

"In order that there may be on hand at the time of retirement a maximum of pertinent cost data, every effort shall be made at the time plant is constructed and/or installed to obtain all such available cost data by subcontracts, trades, and if practicable, by retirement units."

This quotation is from Section 31.2-26, Paragraph (d), of the FCC System of Accounts, as amended Sept. 3, 1952.

In concise terms, then, we have in the continuing property record a perpetual inventory of telephone plant by year of installation, together with the dollars invested therein.

Why Do We Need This Record?

By description and definition it appears that continuing property records have been developed primarily for the purposes of proper retirement pricing and depreciation studies, however, they are necessary or helpful in solving many other problems in the telephone industry.

For example, in those states using trended original cost as a rate base these records are essential to its development for they provide a record of the investment in each account by year of placement, which is necessary for trending. When a consultant is hired for this purpose his fee should be considerably less if continuing property records are available than if they are not. Furthermore, if the rate base is founded on a good property record it is more supportable evidence for presentation in a rate case, which is always beneficial.

When reproduction cost evidence is used in a rate case, the continuing property record is again useful. For it provides a readily available inventory of the property used and useful in telephone service that can be physically spot-checked with a minimum of effort. And, again, this fact strengthens a rate case presentation while reducing its cost.

Even in states using original cost as the rate base, a good property record makes the company's case stronger because it is comparatively easy to verify and substantiate.

Another use has come to the attention of the many companies that have recently been faced with the problem of making separation studies. In this connection it has been necessary to identify and price out certain items of outside plant, central office equipment, and buildings. A continuing property record, when available, makes this job easier, shorter, and, therefore, cheaper as far as the company is concerned.

Often a company must furnish cost data, that can be substantiated, in connection with installations for a government body or plant rearrangements instigated by a government body, if they want to be adequately compensated for such cost. In this and many other cases where cost data is required, the continuing property record can again make the job cheaper and better.

Currently, it appears that a record of this sort will be necessary in order to take full advantage of the present income tax law with its provision for rapid depreciation. In this respect alone, the continuing property record could more than pay for itself.

Thus, it seems that there are numerous uses for the continuing property record other than meeting its basic objectives. And, all of these products or by-products derived from the continuing property record provide management of a company with additional ad-

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ministrative tools which will assist them in properly and efficiently discharging their responsibilities.

How Can Record Be Maintained?

Before delving into this subject, let's briefly review the information that should be available from the records. They must first set forth a description sufficiently complete to permit a good mental picture of the unit involved. The type of description necessary varies from the simple, such as, "109 iron wire," to the more complex description of a multi-story building. Besides the description, which should set forth the particulars as to kind, character, and size, the property record has to show the number of such units, their cost, age, and location.

Left to right: R. H. Stone of Galion, Ohio; Burton W. Saunders of Springfield, Ill., and K. C. Gillette of Wheaton, Ill.

Continuing property record, or perpetual plant inventory, has been the description or title generally given that set of records, maintained by many companies, which sets forth the number of units in service at any particular time, together with their cost. This should be considered a continuing property record summary which is only a piece part of the full requirement. Usually, the detail as to age and location is missing, and this is the most difficult to develop. (It is preferable for the summary to set forth the units in service by year installed, together with their associated costs.) It is assumed that there is no problem associating dollars and units if their age and location is known.

In connection with these latter subjects, I intend to present a few ideas that can reduce the cost of keeping complete continuing property records. These ideas are presented with the thought that while you may not be able to use them directly, they will at least provide an example of what can be done. It is to be expected that different companies will find different systems more efficient. In the scheme of records suggested you will find that any record maintained by the company can become part of your continuing property record if it can supply information you need. In fact, this is my basic philosophy.

In attempting to outline a system of records that can serve as the source of age and location data for each account I have made certain assumptions as to existing records. Your company may not keep these records, but you may have a similar record that can be used.

"Account 201-Organization" primarily requires a detailed description of the work involved and the source of the organization expenses that have been capitalized. For this account all of the data can usually be carried in the continuing property record summary with no additional detail required.

The continuing property record for "Account 202-Franchises" could very well be as simple as a list of the franchises capitalized by the company, together with their cost and date of acquisition. The franchise itself will provide the necessary description.

"Account 203-Patent Rights" can be handled in a manner similar to franchises.

"Account 207-Right-of-Way" can be treated quite simply by identifying the rights-of-way acquired by a number. Rights-of-way acquired in this day and age should be backed up by a permit or other legal document which would be part of the corporate files. These documents would be used as the description of the right-of-way and would carry the assigned identification number. As a means of determining what right-of-way should be retired, when a given route is abandoned, these identification numbers can be listed in a space established for the purpose on the plant record maps.

The continuing property record for "Account 211-Land" would be similar to that described for rights-of-way except that the legal documents would normally be deeds rather than permits.

"Account 212-Buildings" requires a more involved continuing property record than the preceding accounts. A building should be described in sufficient detail so that piece parts installed at different times can be properly aged and priced if they are retired before the building itself. This can be accomplished by maintaining a file of all contracts and plans associated with the initial construction and subsequent major additions to the building. Minor alterations and additions should be covered by similar data even though they might be accomplished through the use of company personnel.

The summary record would associate costs with the various additions by appropriate reference to these files. It would generally not be necessary to distribute the costs of a building project to its various components until a retirement had to be priced out, if the aforementioned records have been maintained in sufficient detail.

In the case of "Account 221-Central Office Equipment," a file similar to that maintained for buildings can be established. Specifications, floor plans, and bay layouts should all be part of the file. A master floor plan showing the jobs that effected each bay will provide a good index to the file. It is suggested that complete and detailed specifications be acquired for every addition effecting a central office. These are particularly valuable for subsequent equipment engineering while at the same time they provide a good description of the equipment for your continuing property records. In the recent nationwide "A" and "B" toll studies this type of information, where available, more than paid for itself in time saved.

In order to establish a continuing property record for station apparatus it is necessary to make at least one assumption that is not 100 per cent correct. To provide data with respect to age it is assumed that the base represents the whole instrument and is seldom replaced during maintenance procedures.

Many instrument manufacturers, via the code stampings on the base, indicate the year of manufacture. Thus, if a record of purchase is maintained by years and instruments junked are reported by year of manufacture, as indicated on the base, a fairly accurate age distribution can be developed. This assumes that the year of purchase is the same as the year of manufacture.

In statistical work with this type of data, the results can usually be adjusted to reflect the possible errors in the basic assumptions. For the location

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records there are at least two possible sources, one would be revenue accounting records, and the other the plant department station cards.

The plant department records can also be used to provide data in respect to station installations and drop and block wire. These records can be the location record as well as the source of age distribution if the proper dates of installation are recorded thereon. This will, no doubt, require some modification of these records. One method of summarizing the age distribution data is to inventory the installations from these records at the beginning of each year, by year of installation, which in many cases would be less expensive than trying to maintain a record by daily reporting during the year. This is especially true if your rate of connects and disconnects is high when compared with your stations in service.

Large private branch exchanges can be treated, insofar as property records are concerned, as though they were central offices. The smaller switchboards can be handled by establishing individual record cards for each board, using once again, an identification number for reference and filing purposes. If centrally located, the record of costs can be kept on the same card.

Booths are subject to the same treatment accorded the smaller private branch exchanges. It can be noted in passing that it is generally feasible to maintain this type of record in the accounting office in small companies. Larger companies may desire to keep the location, engineering and age data in the plant department, using the booth identification number to tie their record with the accounting department's record of costs.

There are several means of developing age and location data for poles. Basic to all of the methods is the use of pole numbers. In this respect, one set of pole numbers for the company as a whole is best. Pole cards, filed in numerical order, can be used to provide the data as to location and age, together with interest ownership where a joint pole is concerned.

Another method relies on plant record maps for location and description, but uses date nails for aging purposes.

A third method includes age on the plant record maps also. Incidentally, many of the pole suppliers use brands that show date of treatment. This can be put to good use where you are attempting to build an initial record.

The records for the aerial, underground, buried and submarine cable accounts can all be developed in a like manner. About the only reasonable point for establishing location and age data is the plant record maps. So that the recorded length will check with the maps, only measured in service lengths should be recorded in the summaries. This will eliminate discrepancies caused by cable lap which occur when the footage withdrawn from the storeroom is used in plant accounting summary records, as is the practice with many companies.

Generally, the plant or engineering departments maintain a list of terminals in service showing location by street address or pole number that could readily be modified to show year installed for subsequent aging purposes. Often terminals are shown on the plant record maps so that here would be another possible place to keep a record of year installed. Similar data can be recorded on the plant record maps for loading coil cases if you have many installed; if not, a descriptive type of record could be maintained.

Location and age data for aerial wire is another set of information that can best be maintained in map form. Incidentally, I would suggest that all wire records use feet rather than pounds as the basic unit. If pounds are used it is almost impossible to inventory wire and expect to find any correlation with your records, and the cause of your troubles would be erroneous retirements if the wire was weighed in order to determine the amount to be retired. I imagine that any of you who have seen old iron wire can vouch for the change in weight between the date of its placement and date of removal.

Conduit maps generally provide the best vehicle for age and location data for "Account 244-Underground Conduit." An identification number could be assigned to each manhole so that either a card record or a tabular type record could be kept for them.

Records for furniture and fixtures, as well as vehicles and other work equipment, can also be readily established if the various units are assigned identification numbers. The description of an item, together with its purchase date, can be listed with the assigned identification number in one master list for each type of equipment. Then all additions and retirements are referenced by this number. By checking with the list, the age of the item can readily be determined. In many cases, it is possible to include the last two digits of the year the unit was purchased as a particular part of the number which permits aging without reference to any list.

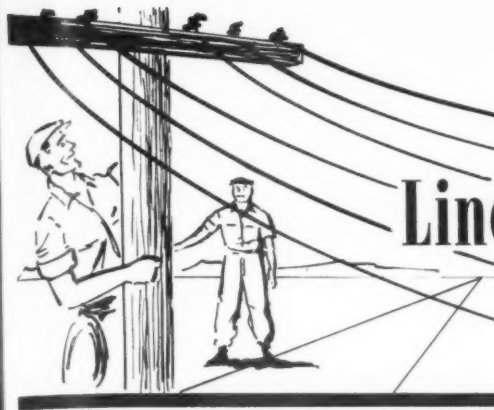
In conclusion, it appears that there are many advantages to continuing property records as well as various methods providing the necessary information, however, there is one important factor that cannot be ignored, and that is the cost of such records. Actually the cost of maintaining a continuing property record is not much greater than normal plant accounting costs if all the information is readily available. In fact, when you consider what you can buy with a small additional accounting cost, it would appear that maintaining such records is economically feasible. This would be true of the cost of maintaining established records.

Unfortunately, the cost of establishing a continuing property record can be quite high. This is particularly true if you find it necessary to hire a valuation engineer to come in and make a complete inventory and appraisal as the starting point for your continuing property record. In order to keep this initial cost as low as possible, it would be wise to consider ways and means of by-passing a portion or all of such an inventory and appraisal.

There are several ways of accomplishing the desired end-result without the expense of a complete inventory and appraisal for the one purpose only. For instance, you may have required an inventory and appraisal for rate-

(Please turn to page 144)

Left to right: D. O. Hood of Medford, Ore.; Mrs. David Peterson and Mr. Peterson of Medford, Wis.; Mrs. A. D. Scripture and Mr. Scripture of Everett, Wash., and H. E. Hagemann of Lorain, O.



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DEPRECIATION and the New Law

By C. N. OSTERGREN
American Telephone & Telegraph Co.

(Accounting Conference Address)

IT IS OVER a year since the Internal Revenue Code of 1954 became part of the law of the land. Since then business management—from farmers, village store owners and local telephone companies to the country's largest corporations—have wrestled with this code, and particularly with Section 167, which deals with depreciation.

And, business men are not alone in this. As yet early in September, 1955) the Internal Revenue Service has not issued its regulations governing this section. A draft of proposed regulations was released for comment about a year ago. Last December hearings were held at which many taxpayers offered suggestions. Prominent among these were pleas that the regulations be made as broad and flexible as possible, to meet the differing problems of diverse industries; and that the deadline date for taxpayers' decisions on their depreciation claims for calendar year 1954 be set as far in the future as possible.

In addition to business men and the Internal Revenue Service, the accounting profession is troubled. And so are the regulatory commissions. Accounting people, both those who are in business management and those who are in public accounting firms, have found themselves squarely faced by the question—Does the use of accelerated depreciation for tax purposes result in a tax saving, or is it a tax deferment? This is also a major question for the regulatory agencies—not only as a question of sound bookkeeping, but perhaps more urgently as a problem of rate making.

What Is Section 167?

Section 167 is that part of the Internal Revenue Code of 1954 which deals with depreciation. By this time probably everyone who has any interest in business income knows that the new code contains entirely new depreciation provisions, which have aroused lively discussion. Very briefly, the law provides:

(1) That a fair and reasonable deduction from taxable income may be taken for depreciation each tax year. (The wording of this introductory paragraph is identical with the opening paragraph of the old code.)

(2) That the straight-line method is a reasonable method.

(3) That the double declining balance method is reasonable—but only for facilities acquired *new* after 1953.

(4) That the sum of the years—digits method is reasonable—also for facilities acquired new after 1953.

(5) That any other consistent method may be used for facilities acquired new after 1953, provided that it does not accumulate more depreciation than the double declining balance method.

(6) That, if the declining balance method is chosen, a change to the remaining life straight-line method may be elected at any time. (This election is not open if another accelerated method has been chosen.)

In the absence of tax regulations, it is idle to consider what methods of depreciation computation are going to be required, which ones will be most advantageous to the taxpayer, and the quantity and nature of records that will be required. More than probably these questions will be difficult enough to answer even with the regulations available.

Aside from the numerous problems that will have to be resolved regarding the interpretation of the new tax regulations and the workng up of the data which may be required by the Internal Revenue Service, there are other tax problems which in some cases may be important. For example, it will be necessary to support service life estimates for plant acquired new since 1953 and service life estimates for the older plant. It does not necessarily follow that the same life will be appropriate for both.

The point is that either two schedules of service lives must be developed and supported or else it must be proven that one schedule applies to both the old and the new plant. Furthermore, those companies which have been using the same lives for tax, book, and rate case purposes, have been greatly helped by that fact. With the use of accelerated depreciation, the companies may not be able to say that the lives which they are using have also been found acceptable by commissions.

But tax problems are not the problems that should concern management before it decides whether or not to claim accelerated depreciation. I am sure the accountants and engineers will be able to handle these.

What Are the Claims Made for Accelerated Depreciation?

(1) It will lead to a more realistic treatment of depreciation for income tax purposes.

(2) It will provide capital for plant construction.

(3) It will reduce taxes, and thereby increase earnings.

Before discussing these points in relation to telephone companies, let us take it for granted that some, or all, of these gains will undoubtedly be enjoyed by various companies outside the utility field. It may even work out that some utility companies will obtain substantial advantages from the new tax law; but utility companies have many problems and situations that are rare in other fields.

(Please turn to page 100)

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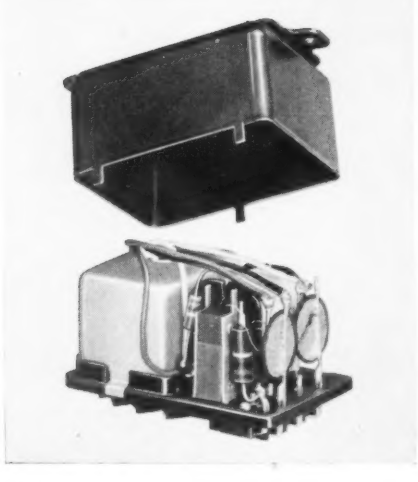

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GENERAL SYSTEM

Realistic Depreciation

Some non-utility companies, particularly since the war, have been unable to obtain the same depreciation deductions for tax purposes as those used for book purposes. Other such companies have used the same depreciation rates for book purposes that they were allowed for tax purposes even though the resulting depreciation accruals may have been low for both purposes. Nevertheless, it has long been considered sound practice by much of industry to write off machinery and other depreciable assets rapidly early in the life of those assets when they are most productive, and particularly in times when earnings are good. This, for much industrial equipment at least, is considered to be realistic depreciation.

The Internal Revenue people have generally favored slower write-offs for tax purposes, particularly since 1934. It is only natural in such companies to feel that the change in the law which permits a narrowing of the gap between book and tax depreciation is a more realistic depreciation treatment.

In the case of many utility companies the situation may well be the reverse. Very likely many of them, at least at times during the past, have used higher depreciation for tax purposes than for book purposes. In recent years these amounts have tended to come together and it may be that most of the utility industry is now using the same depreciation rates for tax as for book purposes. Many telephone companies, including those of the Bell System, have for many years, or even since 1913, used the same depreciation rates for all purposes.

At this point, however, it is well to emphasize that there is no indication in the tax law or in the reports of the congressional committees, which wrote the law, that it was intended for some industries but not for others. It is quite clear that any company that wishes to, may take full advantage of the accelerated depreciation provisions.

This is true regardless of whether to do so would be more or less realistic than what the companies are doing now. But it is only fair to point out that the basic *justification* for accelerated depreciation, as it was presented by witnesses before the congressional committees, which wrote the new tax code, was that it is realistic depreciation.

Capital for Plant Construction

Here again we find a striking difference between regulated and non-regulated industry. A non-utility company may be able to increase its earnings through tax reductions, and if it wishes it can plow these increased earnings back into the business. Any tax reduction which is realized will then provide capital which might not otherwise be readily available.

Left to right: Spencer Montgomery of Windsor Locke, Conn.; Mrs. R. F. Williams of Pendleton, Ind.; Ellis Weld Jr. of Clifton Springs, N. Y.; Mrs. D. F. Williams of Pendleton, Ind., and E. S. George of Milltown, N. J.

In a regulated utility company the matter may not be so simple. Among regulatory commission people there may be differences of opinion as to what should be done with any tax reductions that become possible under the accelerated depreciation provisions. Many commission people will agree that it was the intent of Congress that such tax reductions should be retained by a company for use in the expansion or modification of its facilities in order thereby to stimulate the economy and to raise the standard of living in this country.

Other commission people may consider that any possible tax reduction merely reduces the cost of operation and thereby decreases the revenue requirements. In other words, those who hold this view feel that in the utility industry any tax reduction should immediately be passed on to consumers. If this is done, accelerated depreciation will not produce any capital.

But if this view is encountered we may recall that the *reason* Congress modified the depreciation provisions was to make funds more readily available for plant construction.

Does New Law Reduce Taxes?

This question has been widely debated. If a company has not been able to use as high depreciation rates for tax purposes as it has used for book purposes, then that company has, in effect, prepaid taxes. If they can now increase their tax depreciation they will, in effect, get back these prepaid taxes. This will be true until such a time as their accumulated tax depreciation reserve catches up with their book depreciation reserve.

Again, if a company now has a tax depreciation reserve which is equal to, or greater than, the book depreciation reserve, and if this company adopts and uses from now on higher depreciation rates for tax purposes than for book purposes, it is not really saving taxes. It is deferring taxes.

Since not more than the cost of property can be recovered through tax depreciation, it is evident that the use of high depreciation rates for tax purposes now can only mean, either that low depreciation rates have been used in the past, or that they will be used some time in the future. In either case, no tax saving (assuming constant tax rates) is possible; it is only a question of timing.

There are some points on the other side of this question, however. First, so long as a company continues to grow rapidly, the tax deferment continues. In other words, it is only when construction falls off substantially that the tax collector would catch up with such a company. Second, suppose that corporation tax rates were greatly reduced in the not too distant future. If this were to happen, instead of this being a tax deferment it might turn out to be a real tax saving.

It does not seem amiss to point out that it used to be argued that no depreciation expense occurred until plant was retired and, therefore, practically no depreciation reserve need be set up. In other words, it was argued that no deduction needed to be made from earnings until retirement actually occurred.

The consequences have amply proved the fallacy of this argument. The argument that a tax reduction resulting from the use of lower depreciation rates for book than for tax purposes (assuming constant tax rates) results in an income increase is a similar one. It assumes that a company will never have to charge to operating expenses

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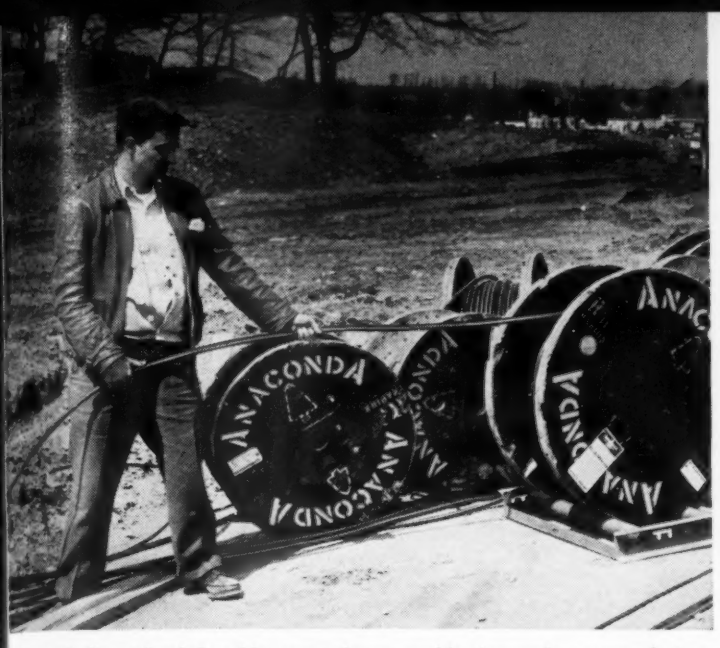

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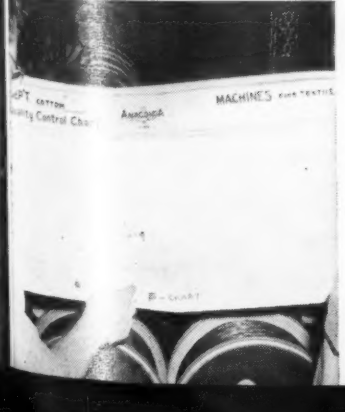

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that part of plant investment which has been taken as depreciation for tax purposes but not for book purposes.

Technical Problems

It seems probable that any company which is acquiring new facilities will be able to use accelerated depreciation if it wishes to and that it will be able to find solutions to the problems of record-keeping and determination of tax depreciation accruals, which will meet the requirements of the Internal Revenue Service. No attempt will be made here to indicate how these problems may be solved, but some of them will be briefly mentioned.

The tax code requires that property acquired new after 1953 be segregated and that accelerated depreciation be limited to this property. Without further amplification it should be obvious that this will involve real difficulty, particularly in such matters as mass property accounts, situations where property is frequently re-used, and situations where complex property was under construction at the end of 1953. (These problems will be considerably simpler if accelerated depreciation is used for post 1954 plant additions and foregone for 1954 additions.)

It is also far from clear what method of developing depreciation rates under the sum of the years-digits method for mass property will be acceptable. In addition, it is not clear that it may not be necessary to have a complete segregation of property by years of placing for all property acquired new after 1953 (or 1954, if the first year is passed up).

The major accounting problems revolve around the question previously raised, that is, does accelerated depreciation result in tax savings or is it a tax deferment?

Naturally, if it is a tax saving no special accounting is required. The tax saving simply means that taxes are lower and earnings higher. If, however, this is a tax deferment, prudence would seem to indicate that the difference between taxes paid and what they would have been on a normal basis, should be earmarked.

In this view, it would seem unwise to treat these dollars as unrestricted earnings. It must be added that the accounting profession, as well as many other interested people, are divided on the question of whether this is a tax saving or tax deferment.

Of course if the difference between normal and actual taxes is earmarked, many accounting problems could well arise in the future. For example, what, if anything, should be done if tax rates change or if important structural changes are made in the tax laws?

At the hearing held by the Internal Revenue Service last December (already mentioned) a representative of the Bell System stated that the matter of accelerated depreciation was more a regulatory commission problem than a tax problem. This still seems to be the situation.

As yet neither the FCC nor the Federal Power Commission (FPC) has made any formal commitment regarding either rate-making or accounting aspects of accelerated depreciation. The FPC was petitioned several months ago by the Columbia Gas System to issue an order specifying the accounting to be followed, but it has not yet done so. So far as I know, the FCC has not been formally requested to take any action.

A number of state commissions have ruled, on petition by one or more utility companies, as to the accounting, but most of them have been silent on the rate-making question. With one, or possibly two exceptions, it appears that the state commissions have all ruled that accelerated depreciation, when taken for tax but not for book purposes, results in a tax deferment and not in a tax saving. (See the appendix for a list of rulings which have come to my attention.)

Now these rulings are significant and important, but they should not be taken as final evidence that all the commissions will take this view. (In fact, one of the commissions makes the ruling tentative, and subject to change after the commission has completed its studies of the accelerated depreciation problem.)

It may be presumed that both the Committee on Depreciation and the Committee on Accounts and Statistics of the National Association of Railroad & Utility Commissioners (NARUC) will report on this subject at their annual convention this fall. While awaiting their reports it might be prudent not to reach any conclusions regarding future rulings of regulatory commissions. In this connection, it is well known that some members of those committees take the position that tax reductions resulting from the use of accelerated depreciation are, for many kinds of property, by no means tax deferments.

This phase of the matter may be summed up as follows:

If a company adopts accelerated depreciation for tax purposes, it may feel that it is essential to treat the difference between actual and normalized taxes as a deferred liability, which must be accrued for currently in the accounts before coming to net earnings.

The commission may follow the same procedure for rate purposes, but if the commission at any time feels that the difference between actual and normalized taxes is a tax saving, and not a deferment, the company's rates may be reduced, and it will then find itself in the untenable position of accruing currently in the accounts for a deferred liability, even though the service rates do not provide the dollars for it.

If a commission recognizes that this is a tax deferment and permits the company to earn enough money to keep up a deferred tax reserve, the company's new capital requirements would be reduced. If, in addition, the commission did not deduct this tax reserve when arriving at a rate base and did not lower the rate of return, there would also be an increment in earnings.

There is, of course, this to be remembered. Despite the stand the commission takes now, no commission can be indefinitely bound. In the event that a company is now allowed to build up a deferred tax reserve and if it grows to substantial proportions this reserve could become a problem. The pressures under which the commissions operate, particularly during hard times, might well lead in some cases to the

(Please turn to page 10

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requirement that the reserve be drawn in order to improve the reported earnings.

Financial Questions

The major financial question is: Does accelerated depreciation provide a source of capital, thus lowering the amounts of new capital that must be raised through ordinary channels? This question is important to all companies, and more so to any that may have difficulty in raising all the capital they need.

In various cases, therefore, accelerated depreciation, despite its difficulties and even dangers, may well be worth invoking, but in telephone companies and other utilities it will, of course, provide capital only under favorable regulation, such as already explained.

Any company which does decide to make use of this provision, and which also sets up a reserve for deferred taxes, would do well to consider what kind of capital this really is. Perhaps it can be best described as a debt to the federal government, the due date of which is not known, and with a face value at maturity which is not known. It is a debt with a zero rate of interest.

Under this view it probably would be looked upon as capital which takes the place of other forms of debt. In a company with a low debt ratio, it might instead hold down the amount of equity capital required, but in a company where the debt ratio was already high enough, it could with safety take the place only of other debt.

Long-Term Problems

There may be many of these. The record keeping alone, for the various segregations that may be required merely for tax purposes, can become more and more difficult as time goes on.

Tax laws and tax rates will change. No one can tell in what direction. If tax rates go down accelerated depreciation now might be advantageous. If they go up its use now might be detrimental in the long-run. The tax law may easily be changed by a Congress not sympathetic toward industry, including utilities. Congress may be influenced by taxpayers who will contend that the present law discriminates against them. A very real possibility is that Congress may repeal the accelerated depreciation provisions, or change them drastically.

Regulatory commissions have changes in personnel. State laws change. No one knows what kind of problems might arise here.

Conclusions

Although the record keeping and calculation will probably be burdensome, these alone should not deter anyone from going after accelerated depreciation. The techniques to be used are not known, but it seems probable that various methods will be acceptable.

Thus, it is believed that most companies can, if they wish, make use of accelerated depreciation. In my opinion, tax reductions resulting from higher tax depreciation are tax deferments and not tax savings. While most of the regulatory commissions which have acted agree with this view, at least as respects accounting, there is a strong current of opinion in the opposite direction and what the commissions will do in rate cases is practically unknown. The 1954 Tax Code may be drastically changed, in such a way that the taking of accelerated depreciation now would be of little or no advantage.

APPENDIX I

State Commission Orders Relating to Accounting Procedures in Connection with Accelerated Depreciation for Income Tax Purposes

LOUISIANA

DATE OF ORDER: Feb. 25, 1953 (Emergency facilities only); June 13, 1955 (same order made applicable to accelerated depreciation).

COMPANY: General order of the Commission.

AUTHORIZED ACCOUNTING: Charge difference between allowable and normal taxes to "Provision for Deferred Federal Income Taxes"; credit to "Reserve for Deferred Federal Income Taxes."

MICHIGAN

DATE OF ORDER: Nov. 5, 1954.

COMPANY: Detroit Edison Co.

AUTHORIZED ACCOUNTING: Charge difference between allowable and normal taxes to "Provision for Deferred Federal Income Taxes Arising Out of Section 167, I.R.C." and credit to "Reserve for Deferred Federal Income Taxes—Section 167, I.R.C."

INDIANA

DATE OF ORDER: Dec. 23, 1954.

COMPANIES: Indianapolis Power & Light Co. and others.

AUTHORIZED ACCOUNTING: Charge difference between allowable and normal taxes to "Provision for Deferred Federal Income Taxes" and credit to "Appropriated Surplus Arising from Deferment of Federal Income Taxes."

MAINE

DATE OF ORDER: Jan. 12, 1955.

COMPANY: Bangor Hydro-Electric Co.

AUTHORIZED ACCOUNTING: Charge difference between allowable and normal taxes to "Provision for Deferred Federal Income Taxes" and credit to "Reserve for Deferred Federal Income Taxes."

ALABAMA

DATE OF ORDER: Feb. 28, 1955.

COMPANY: Alabama Power Co.

AUTHORIZED ACCOUNTING: Charge difference between allowable and normal taxes to "Provision for Deferred Federal Income Taxes" and credit to "Earned Surplus Restricted for Future Federal Income Taxes."

WEST VIRGINIA

DATE OF ORDER: May 26, 1955.

COMPANY: Appalachian Electric Power Co.

AUTHORIZED ACCOUNTING: Charge difference between allowable and normal taxes to "Provision for Deferred Federal Income Taxes" and credit to "Earned Surplus Restricted for Future Federal Taxes on Income."

VIRGINIA

DATE OF ORDER: June 6, 1955.

COMPANY: Appalachian Electric Power Co.

AUTHORIZED ACCOUNTING: Charge difference between allowable and normal taxes to "Provision for Future Federal Income Taxes" and credit to "Earned Surplus Restricted for Future Federal Taxes on Income."

ILLINOIS

DATE OF ORDER: June 13, 1955.

COMPANY: Commonwealth Edison Co.

AUTHORIZED ACCOUNTING: Charge difference between allowable and normal taxes to "Provision for Deferred Federal Income Taxes" and credit to "Reserve for Deferred Federal Income Taxes."

GEORGIA

DATE OF ORDER: Aug. 16, 1955.

COMPANY: Georgia Power Co.

AUTHORIZED ACCOUNTING: Charge difference between allowable and normal taxes to income and credit it to a reserve for deferred income taxes.

KENTUCKY

DATE OF ORDER: Aug. 16, 1955.

COMPANY: Kentucky Power Co.

AUTHORIZED ACCOUNTING: Charge difference between allowable and normal taxes to "Provision for Future Federal Income Taxes" and credit to "Earned Surplus Restricted for Future Federal Taxes on Income."

FLORIDA

DATE OF ORDER: Sept. 1, 1955.

COMPANIES: Gulf Power Co.; Tampa Electric Co., and others.

AUTHORIZED ACCOUNTING: Charge difference between allowable and normal taxes to "Provision for Deferred Federal Income Taxes" and credit to "Earned Surplus Restricted for Future Federal Income Taxes."

OHIO

DATE OF ORDER: Sept. 9, 1955.

COMPANY: Ohio Power Co.

AUTHORIZED ACCOUNTING: Application of company *denied* (applicant sought authority to credit difference between allowable and normal taxes to "Earned *Surplus Restricted* for Federal Taxes on Income").

OHIO

DATE OF ORDER: Sept. 13, 1955.

COMPANY: Cleveland Electric Illuminating Co.

AUTHORIZED ACCOUNTING: Charge difference between allowable and normal taxes to "Provision for Special Reserve" and credit to "Special Reserve."

WHAT ARE THE PROBLEMS

Continued from page 22

higher expenses and necessary rate relief may not be as desperate, on the whole, as they were in the immediate post-Korean War period. But there is nothing on the present horizon to indicate that operating expenses in the near future, are going to go down, or will even stay put for awhile, necessarily. Current contract settlements indicate a trend toward higher wage increases. Most of our companies are still faced with a certain amount of backlog of necessary plant expansion at high prices.

In addition, the reluctance of some regulatory authorities to recognize the serious consequences of economic depreciation and the erosion of telephone property investment, due to the toll of postwar inflation, may be putting our companies in an earnings position which is more difficult than we realize ourselves. When the plant is being consumed, and is not being restored through sufficient rate increase, the economic consequences might not show up for years. The fact that we may not be holding our own, economically, can be temporarily obscured by raising new money. When such funds must go into replacement of plant, which has been worn out in the public service, we are not holding our own.

In this difficult situation, the old adage of strength in unity is of special application to our numerous Independent companies. We hear frequent predictions about the vanishing small company and the inevitability of large-scale organization in these days of mergers and consolidations in *non-regulated* industries. But our telephone companies do have certain advantages in weathering the storms of economic pressure if they are able to help each other in the field of *ideas!* I do not know how that could better be done than through the medium of industry associations, such as the United States Independent Telephone Association on the national level, and through the state associations on the local level.

We must recognize, of course, that small company organizations have management problems of their own.

Within our Independent telephone company membership, we find examples of good, bad, and indifferent operation. And when we consider the responsibilities which face us in the future, the need for more cooperative enterprise among ourselves becomes self-evident. And I repeat, it is in the field of ideas, both ideas for new business, and for taking care of old business that we can help each other by exchange of prac-

drops last

and last

and last . . .

AND COSTS LESS TOO

WITH ALPHADUCT
NEOPRENE JACKETED
DROP WIRE

You'll be money ahead when you use long lasting Alphaduct drop wire. The tough neoprene jacket is the most effective weather protection ever developed. Alphaduct is scientifically made on modern machinery, is step tested during every stage of manufacture. You can depend on it to cut down on maintenance trips.

Alphaduct's Dumbbell or figure eight construction saves on first costs too. It is less expensive than twisted pair, yet has proved to be every bit as satisfactory. Actually, Alphaduct Dumbbell drop wire has the same thickness of insulation and neoprene jacket per conductor as is used on regular twisted pair. The figure eight construction makes it much easier to split than regular parallel.

Try Alphaduct neoprene jacketed Dumbbell drop wire. It's dated . . . so you can easily check the extra service it will provide. Order today from one of our distributors listed below.

IT'S DATED • FOR YOUR CONVENIENCE AND PROTECTION

ALPHADUCT WIRE AND CABLE COMPANY
MILLTOWN, NEW JERSEY

NATIONAL DISTRIBUTORS—LEICH SALES CORPORATION—CHICAGO, ILL.
REGIONAL DISTRIBUTORS—THE LINDSAY TELEPHONE SUPPLY CO., CLEVELAND, OHIO
PANKEY SUPPLY COMPANY, CHARLOTTESVILLE, VA.

GENERAL SYSTEM

construction and maintenance DIGEST

- **Terminal saves money**
- **Die-hard battery**
- **Wire saves poles**
- **Economy plus**
- **Supersonic splice**

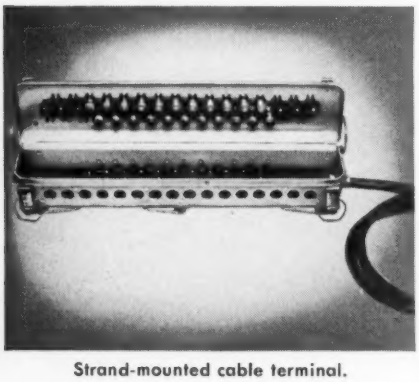
Published every week to help you get the most out of your materials and supplies dollar

by C. J. Reynolds, Stromberg-Carlson Company

The few dollars you spend on *reliable* equipment today will be repaid a hundredfold in lower maintenance costs for years to come. Protect your investment with the double guarantee offered by Stromberg-Carlson. First, leading manufacturers build this equipment, and guarantee it. Second, because we recommend and sell this equipment to the telephone industry, we *also* guarantee its performance!

Designed for economy

That's the way to describe the New "Stranterm" cable terminal, the most flexible terminal ever developed. The Stranterm is primarily strand-mounted, but may be pole-mounted. The stub may be taken out of either end of the terminal and can be either lead or plastic cable. The core section is gas-tight and moistureproof; the terminal may be protected, **even after installation,**



Strand-mounted cable terminal.

either fully or on a pair-by-pair basis by the addition of Cook's "snap-in" Mini-Gap arresters. The 11 and 16 pair core assemblies are interchangeable and replaceable; and drop wire openings are completely sealed by an exclusive grommeting arrangement.

Protect yourself from battery failures

You can use Exide Manchex Batteries for central office and private branch exchange equipment, and be sure you'll get a supply of power when you need it.

The manchester positive plate with its exclusive button-type construction provides exceptionally

Old age, even high discharge rates, have little effect on this battery.

long life. Latest developments on molded glass jars permit compact space-saving installation.

Heavy terminal posts with copper inserts provide extra conductivity for sustained voltage at high discharge rates. Microporous rubber along with slotted plastic separators, are impervious to chemical and electrical reactions. Plastic spacers assure plate alignment.

Save 10-15 poles per mile

A net saving of 10 to 15 or more pole structures per mile is possible where **Crapo** High-Tensile Telephone Line Wire is used in long-span construction. Fewer pole structures mean substantial savings in time, labor and material, and in maintenance.

Crapo HTL-135 makes possible spans of 350 feet in heavy, 450 feet in medium, and 500 feet in light loading areas. Its practical economy should be considered for new extensions and where old lines are to be replaced.

Crapo HTL-85 (No. 12 B. W. G.) permits spans of 225 feet in heavy, 325 feet in medium, and 375 feet in light loading districts; provides stronger spans on existing pole structures. Both wires possess superior telephonic transmission qualities.

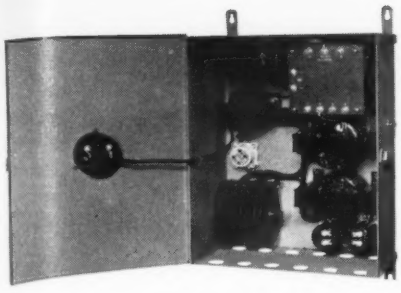
Battery eliminator is easy to buy, costs little to run

To operate your lamp signal and automatic switchboards, here is a battery eliminator that is low in first cost, low in operating cost.

The Schauer Type RA constant voltage battery eliminator delivers a practically constant output voltage, irrespective of current drain.

It is one of several models in the line of Electrox constant voltage battery eliminators manufactured by the Schauer Manufacturing Corp.

Not only do you pay a low purchase price for the Type RA, but

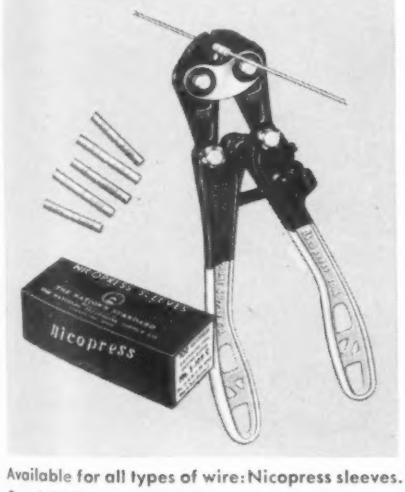


Schauer Electrox battery eliminators (Type RA illustrated) give constant voltage, regardless of current drain.

maintenance is at a bare minimum. Simply plug it into the AC power supply and forget it . . . for years, and years, and years of dependable service.

High-speed splice outlasts the wire itself

You can cut half the time off splicing wires—and get a splice that will actually outlast the conductor itself!



Available for all types of wire: Nicopress sleeves. Special Nicopress tool is easy to use.

Because it is stronger than the rated breaking strength of the wire, you just can't pull apart a joint made with the Nicopress sleeve. It will withstand the toughest strains of vibration, yet makes a neat, compact splice that you can use on drop or inside wires as well as other lines. A tough inner alloy lining—harder than either the sleeve or the conductor—is the secret of Nicopress sleeves' strong grip.

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tical suggestions in our effort toward common goals.

In the final analysis, we must face the basic business challenge of the future, which I repeat is — a growing America and a growing telephone subscriber public which is muliplying faster than the population itself. For this we are going to need new and more plants. We are going to have to plan expenditures for high-priced equipment and high-priced construction. More than that, to serve this new America of the future, we are going to have to have new and better service. These future subscribers will not accept obsolete telephone service.

In this era of deluxe service, it is only to the extent that our companies can command the confidence of both the subscribing public and the investing public that they can do their job. The responsibilities are great, but the rewards should be commensurate. I have never been convinced that the American public expects to receive a quality of service or a quantity of service which is higher than that same public is willing to pay for, under a fair and reasonable system of rates.

We in the telephone industry are still in the fortunate position of selling a service which is far more valuable than it costs the customer to enjoy, by any standard of measurement. Every once in a while we hear about a damage suit for loss of telephone service in which a professional or business subscriber claims damage to the extent of $50 or $100 a day because he had no telephone connection. Such a valuation placed upon this service by the subscriber himself may or may not be realistic. It indicates, however, that we are selling something which is highly valued by the public.

Since it is clear, therefore, that the growing masses of subscribers in the future are going to demand ever-improving as well as ever-increasing services, we must lay our plans accordingly —including plans for adequate compensation for that service. I need not remind you that we are in competition on a money-raising basis with non-regulated industry which is able to pay higher return on investment than telephone companies will ever be allowed to earn. Yet history has shown that there is a well-defined group of investors in the United States who look to our public utilities for secure income, rather than short-range or even speculative profits. It is to these investors that we must appeal to carry on our work, and perform our public service obligation.

The whole picture sums up, therefore, as a unified whole. The things which your national association is doing, were designed to contribute to the fulfillment of this over-all picture of accomplishment. Our work in Congress, our work before the administrative and regulatory agencies, our unified efforts to create good-will and win friends in every quarter for the telephone companies, are all part of that picture.

And you, my friends, are also a very important part of the picture. In fact, I would say you are the most important part of that picture, because it is at the grass-roots level of association membership, such as we see here today in this meeting, that we must look for foundation for all our work, for all our plans, and for whatever we hope to achieve in the years ahead. As long as we can depend on that unity of support, we can be sure our industry can confidently meet the challenge of the years ahead.

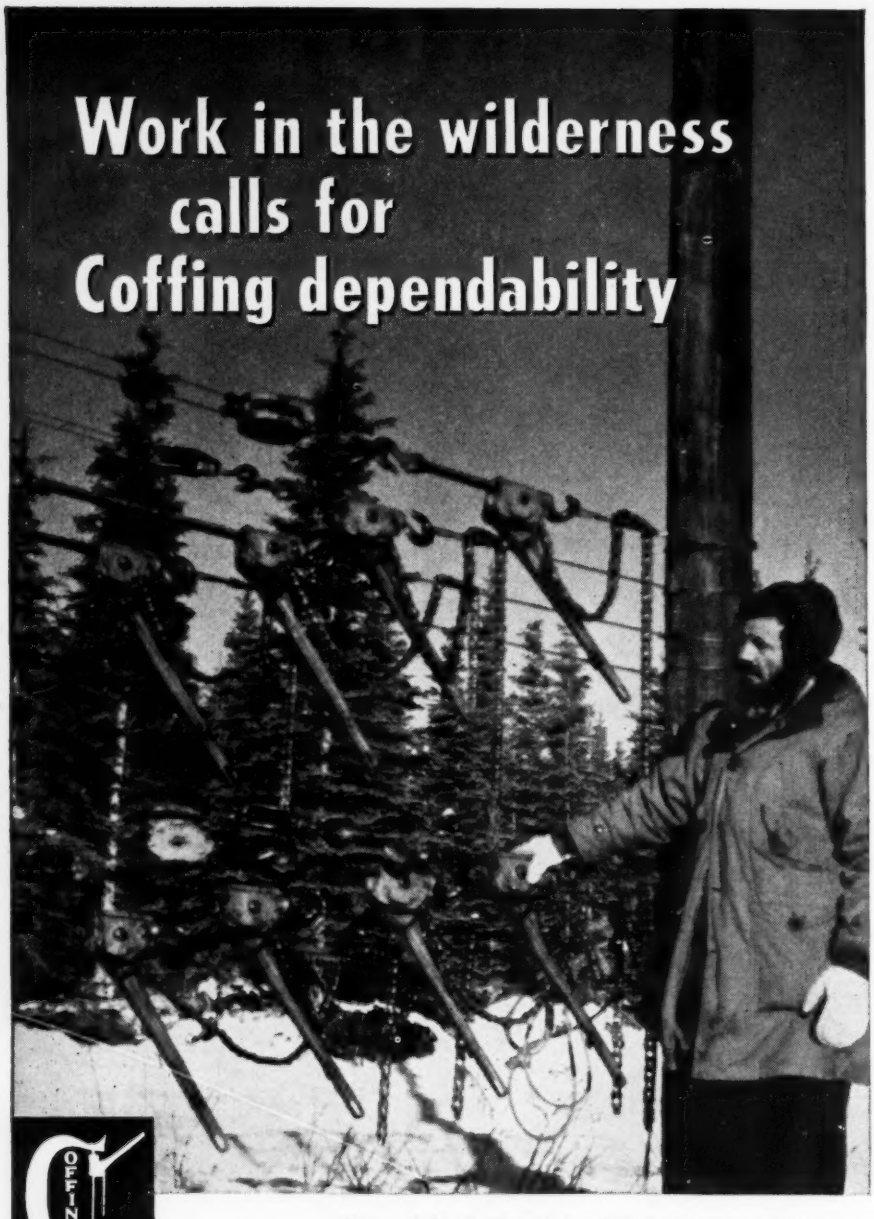
The United States Independent Telephone Association will continue to keep abreast of the responsibilities which have been placed upon it in a dynamic era. Your officers, your directors, and your committees will do their part to live up to their trusts.

The results of their efforts, I repeat, however, rests with you as individuals. I am thinking about the participation to which I referred in my opening statement. The smallest operator can help the industry as a whole if he thinks constructively and lets others know how he feels. Whether you as an individual operator agree or disagree with what you think others believe is not the important thing. The important thing is if you think constructively and make your conclusions known, you will be assisting the industry as a whole in reaching sound viewpoints.

The importance of this individual participation can be illustrated by an experience we had during the last legislative session in my own New York State. Early in the sessions a bill known as the Morgan-Milmoe was introduced. This bill sought to rewrite into the New York State Workmen's Compensation Law the wage loss concept in occupational loss of hearing cases. Due to the known opposition of organized labor most folks thought that there wasn't even a remote chance that the bill would be passed. Despite this pessimism, many employers wrote to their legislative representatives asking for their support of the bill. What happened? The Assembly passed the bill. However, it was not passed by the Senate because three senators who would have routinely supported the bill left the floor before it came to a vote. I submit that if every employer interested in its passage had written his legislative representative the bill would have been passed.

I urge you, therefore, to recognize

Work in the wilderness calls for Coffing dependability



Here, eight Coffing Safety-Pull Ratchet-Lever Hoists are used to stretch spans of wire near Glenallen, Alaska. Other Safety-Pull uses include tightening guys, installing transformers, loading and moving heavy equipment.

On construction jobs in the heart of Alaska, you will find Coffing Safety-Pull Hoists handling the tough pulling, stretching and lifting assignments.

The choice is based on experience. The ratchet-pawl construction, originated by Coffing, gives a positive steel-on-steel action. Its lifting and holding ability is not affected by extreme temperatures. Coffing's record of dependability is also important — especially when working many difficult miles from service and supplies. Every Safety-Pull is designed to handle its rated capacity with a wide margin of safety while its special "Safety Valve" handle protects against overloading damage.

This proved durability is a must in the wilderness and a money saver everywhere. For full information on the complete line of Safety-Pull Ratchet Lever Hoists from ¾ to 15-ton capacity, write for Bulletin T-SP.

COFFING HOIST DIVISION
DUFF-NORTON COMPANY • Danville, Illinois

Quik-Lift Electric Hoists • Hoist-Alls • Mighty-Midget Pullers • Spur-Gear Hoists • Differential Chain Hoists • Load Binders • I-Beam Trolleys

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that the next 10 years will require our individual effort as well as our collective effort. We can't afford to sit back and wait for the other fellow to solve our problems. I don't mean by that, that we are all equally capable, rather I mean that regardless of our capabilities, each of us can make a contribution to the industry.

As we face the vast new field which is opening up in communications, let us commit ourselves to greater individual participation in the affairs of the industry as a whole. Thus we can hasten the day when the whole world can talk over telephones—and perhaps, see each other's faces at the same time. Perhaps then nations will understand each other better. Perhaps—and who can tell—the telephone may be one of the avenues which will help to establish permanent peace in the bright new world for which we are all hoping and praying.

REPORT OF EXECUTIVE

Continued from page 26

intention to purchase in supposed compliance with the understanding reached in the Hall Memorandum of July 19, 1927.

It developed, however, that the Southwestern Bell several months before had obtained an option to buy the property. Thus, the meaning of the 30-day notice, originally intended to give our association an opportunity to protect its interests, was nullified. There were two other Independent companies which at the time would have been interested in purchasing the Tomball company had they known it was for sale.

Because of these circumstances our association joined the Texas Telephone Association in filing a Petition of Intervention and protest with the Federal Communications Commission to which an application by the Southwestern Bell for permission to buy had been presented. Among the points made in the protest were the following: (1) That the proposed purchase price was excessive and would establish a precedent for the sale of other Independent property without regard to the relationship between reasonable value and sale price; (2) that acquisition by the Southwestern Bell would strengthen the Bell position in the industry at the expense of the Independent branch and also deprive Independent manufacturers of an outlet for their products; (3) that an option had been obtained by the Southwestern Bell without notice to the Independent, and (4) that the public interest would not be served if the FCC were to per-

mit encroachment by the Bell into areas where Independent companies stand ready and willing to provide service equal to that proposed by the Bell System.

A hearing on this matter was held last February. The commission's staff recommended denial of the application to purchase. The examiner in April issued a report in which he found the Southwestern Bell had not sustained the burden of proving that the purchase price was reasonable. He also found that the alleged service advantages proposed for subscribers were of a speculative and contingent nature. This was a victory for our association and the Texas association, even though the examiner declined to decide the monopoly issue sought to be raised by the protest.

The case is still pending before the FCC. The Southwestern Bell has filed a petition for reopening of the record so that it might have an opportunity to present further evidence.

California Radio Case

Another FCC proceeding in which our association participated was Docket 10200 involving a request by the state of California to utilize certain radio frequencies to handle Federal-State Market News Service. The FSMNS is a governmental agency operated in California under a formal cooperative agreement between the California State Department of Agriculture and the U. S. Department of Agriculture to disseminate agricultural marketing information.

The USITA, the California Independent Telephone Association, the Pacific Telephone & Telegraph Co., and Western Union all opposed California's request. They asserted the carriers were quite capable of providing the necessary communication service by wire circuits and that it was contrary to the public interest for a state agency to engage in the communications business even on a limited scale.

In a formal decision rendered in July the FCC required the state to surrender the frequencies in question. It stated that cessation of the radio operation would not result in discontinuance of the news service "since common carriers have stated they can furnish a wire network upon three days notice." The Commission also stated that the frequencies involved are peculiarly suited to international service and that the nation's international obligations were a transcendent consideration.

This was a splendid victory for private enterprise. We hope it is portent of what may be expected in FCC Docket 9777, awaiting decision, in

the CHANCE "Blackfoot"

holds more— goes down faster

CAN BE INSTALLED BY MACHINE TO CUT LINE CONSTRUCTION COSTS...

Give the GUY a CHANCE

KING SIZE THIMBLEYE

The extra large eye of the Chance Blackfoot accommodates a turning bar big enough to make hand installation easy, and fits all hole boring machine adapters.

PITCH CONTROLLED

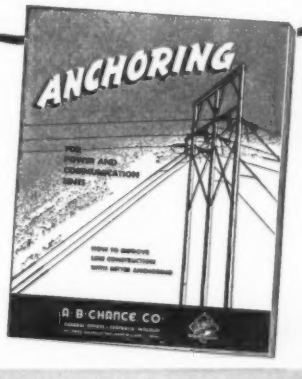
This accurately pitched, fast cutting blade really goes down fast. Every size anchor is individually "pitch controlled."

Recently, a Florida utility company saw how it could save money in two ways on anchor installations. To cut materials costs, this company used *only one* Chance 15 inch Screw Anchor. To cut labor costs, these Chance Screw Anchors were installed by machine. Added together, these savings reduced to a fraction, what this company formerly paid out for guying. And pull tests showed no creep at 22,000 pounds on their installations! You can save money too—specify Chance Anchors for your guys.

SMALLER HUB

The smaller hub on Chance Screw Anchors means less friction—easier installation. Less earth is disturbed during installation. That's why the Blackfoot has greater holding power.

MIKE THE MOLE SAYS: *"Man, this book can help you 'dig' anchors better.*



A. B. CHANCE CO. • 200 N. ALLEN ST. • CENTRALIA, MO.

Here is the most complete guide to better anchoring ever developed. It's chock full of how-to-do-it material to help you select the right anchor for every guying job—and install it properly. It's FREE!

O.K: Have "Mike" send us____copies of "ANCHORING"

NAME_____

COMPANY_____

ADDRESS_____

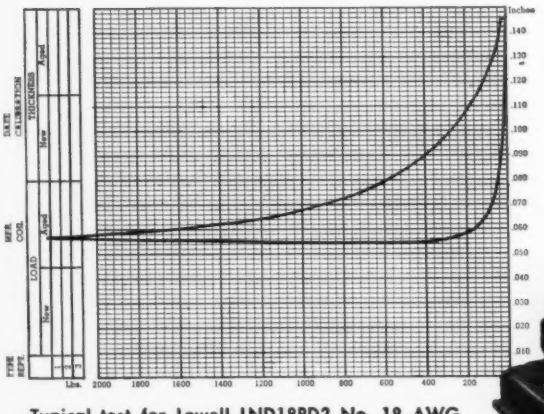
CITY & STATE_____

CA55-10A

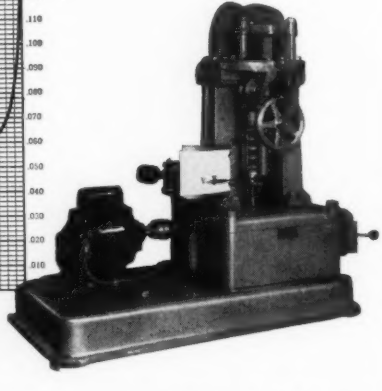
No. 1 in a series of test results on LOWELL TELEPHONE WIRES: Resistance to Compression

LOWELL TELEPHONE WIRES ARE COMPRESSION TESTED TO INSURE LONG LIFE IN SERVICE

In determining the ability of a drop wire to stand up in service, resistance to compression is a major factor. All Lowell parallel neoprene jacketed drop wire is tested in our laboratory to withstand pressure of 2000 lbs. or more before the insulation jackets are crushed. To insure this high resistance to compression, all conductors are brass flashed and special insulating and jacketing compounds are used. Since resistance to compression determines the quality of the adhesion these tests prove that Lowell Drop Wire will stand the crushing action of the P Clamp without cracking of the insulation or jacket, thus insuring dependability and long life in service.



Typical test for Lowell LND18PD2 No. 18 AWG Dumbell design parallel wire, illustrated showing minimum resistance to compression of 2000 lbs.



COMPRESSION TESTER — tests and records resistance to compression of plastic or rubber insulation jackets.

Write today for Lowell Insulated Wire Catalog or mention your wiring needs.

"Fine Wires Only"

LOWELL INSULATED WIRE DIVISION
OF The Overlakes Corporation
171 LINCOLN STREET — LOWELL, MASSACHUSETTS

which California is seeking permission to own a microwave radio station to handle the general administrative communications of state agencies in off-peak periods. Our association and the other groups above mentioned are also participating in this proceeding.

Charitable Contributions

A gradual change has taken place in the attitude of the public concerning the civic duty of corporations in making contributions to charitable organizations. Local fund raising agencies are relying more and more upon corporate giving. Expenditures for contributions are in many quarters regarded as a necessity, much in the same category as payments covering taxes, payrolls, and materials and supplies.

During the past year our association has drawn to the attention of the Federal Communications Commission the fact that for all practical purposes such expenditures represent a necessary business expense and should be accounted for as such. We asked that the commission's accounting rules be appropriately amended. The AT&T has made a similar request.

In a Notice of Proposed Rule Making in June, the commission showed a disposition to view this matter realistically, while at the same time raising question whether a maximum limit should be set on amounts of contributions or restrictions set up as to the types of charity. The Accounting Committee of the National Association of Railroad and Utilities Commissioners has expressed opposition to the charging of contributions to operation. So have a number of state commissions. This matter is now awaiting further commission action.

Advertising Program

The national advertising program upon which our association embarked in May, 1954, is paying increasing dividends in public recognition of the existence of an Independent branch of the telephone industry. This takes many forms. One is the large volume of mail from people who did not know before there was such a thing as an Independent telephone company, from people seeking information as to investment opportunities, from financial institutions interested in obtaining information about the extent of the operations of our companies, from college and high school students, and from people in other walks of life.

That the advertising program was a much needed one is attested by the general enthusiasm with which it has been acclaimed. The Independent telephone industry is becoming known na-

tionally as an important part of the economy of the country. As the industry grows so must our association in its field of usefulness if it is to acquit its responsibility to Independent telephone companies and their manufacturers and suppliers. The advertising program represents a bold and aggressive attempt to claim a fair share of public recognition.

New Emblem

For some time a need has been felt for a revised emblem or insignia to identify and represent the Independent industry. Various suggestions have been considered over the years. At the April, 1955, meeting of our board of directors a new emblem was finally adopted. It shows a handset telephone enclosed in a circle with the word "Independent" in the diameter. Distribution of it was made to member telephone and manufacturing companies in July and it was introduced nationally in magazine advertisements which appeared in *Time* and *U. S. News and World Report* in August. Your association has applied to the Patent Office for the necessary trademark.

The new emblem may be used by any company in our industry. It is necessary, however, that a company be a member of our association before using the words "United States Independent Telephone Association" appearing around the inside of the circle.

The emblem can be used in local and national advertising, on telephone booths, buildings, signs, vehicles, and on company letterhead and telephone directories. It will tend to unite even more closely the entire Independent telephone industry under a single recognizable insignia.

[**EDITOR'S NOTE:** *Mr. Bailey then reviewed the responsibilities and activities of the USITA's 22 committees, with 148 members, and also the association's 14 regional small company committees, with 77 members.*]

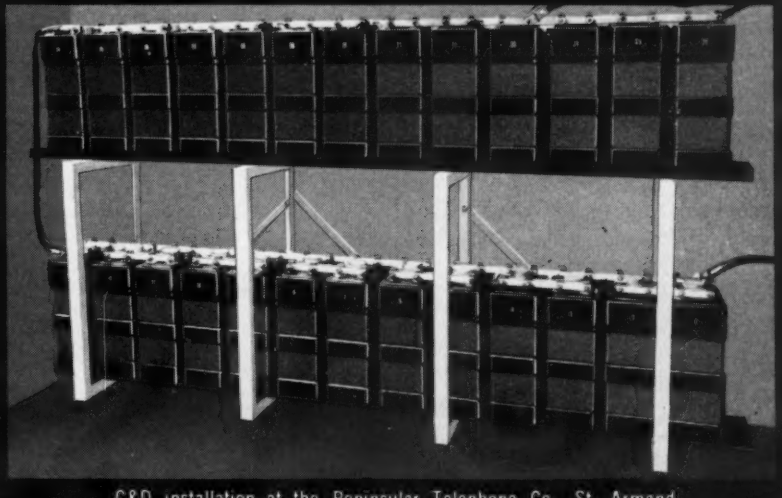
Conclusion

From the foregoing condensed summary of activities and from other information available to our membership it must be apparent that your association in many ways is seeking to acquit its responsibility. It will I believe be evident that the organization is a live, dynamic instrument of much usefulness to the operating and manufacturing companies that maintain membership in it.

Over the years the association has had a great history. It has been a potent, constructive force and influential in many ways of great value to both Independent companies and the firms that supply their equipment and

At the Peninsular Telephone Co.

It's C&D Batteries for EXTRA life



C&D installation at the Peninsular Telephone Co., St. Armand Office, Sarasota, Florida. 26 cells, Type RCT-840, rated 840 A.H., are C&D PlastiCal (lead calcium).

The Peninsular Telephone Company is the second largest independent telephone company in the country, and serves the Central West Coast area of Florida with Tampa as its headquarters. To help provide continuous, dependable telephone service for one of Florida's busiest tourist centers, the Peninsular Telephone Co. chose C&D PlastiCal (lead calcium) batteries for several of the installations in its system.

For your next battery, specify C&D, for with C&D you get:

1. Maximum battery life—minimum expectancy of 25 years
2. Better maintenance—patented Post Seal eliminates acid creepage—lead calcium means less water additions
3. Maximum safety, see C&D's exclusive Saftee-Vent—and tough polystyrene jars and fused cover

You can order C&D batteries from your equipment supplier.

Write for Bulletins!
For details and specifications on C&D telephone batteries, write for Bulletins T-527/55 and T-528 Rev. 3.

C&D BATTERIES, INC.
of Conshohocken, Pa.
Industrial Batteries since 1906
Sales and Service Offices in Principal Cities from Coast to Coast

Rural Protection
MEANS
COOK PROTECTION
WITH BUCKEYE SERVICE

COOK 5 CIRCUIT POWER CROSS PROTECTOR

This heavy duty arrester has been developed for telephone protection when there is a joint occupancy of poles by communication and power circuits. It provides a single assembly for 5 circuits requiring only one ground wire. The No. 10 copper wire coiled pigtail leads are precut to the correct lengths for convenient installation on a 10B cross arm.

Catalog No. 501-50

COOK SINGLE CIRCUIT POWER CROSS PROTECTOR

The miniature member of the family is also used in the event of contact between the power and communication circuits, in addition to furnishing considerable protection from lightning damage. This protector is furnished with an alloy cover, a bracket for quick-easy mounting and 3 copper wire leads.

Catalog No. 501-40

BUCKEYE TELEPHONE & SUPPLY CO.

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other operating needs. In the memory of those familiar with its past and present it has many monuments to the success which has crowned its efforts.

An alert consciousness of the demands of a growing industry will continue to stimulate the association to seek and achieve even richer goals in the years that lie ahead.

750-STATION EXEMPTION

Continued from page 29

exchanges located within a few miles of each other.

One company being a single exchange company would be exempt, while another exchange, perhaps much smaller, would not be exempt because it belonged to a multiple exchange company. It would certainly be most difficult to explain to telephone users the difference in the higher telephone charges required in the exchange having no exemption. This certainly would be most embarrassing to the utility commissioners who would be required to approve these higher rates to comply with the law. Certainly, no one familiar with the operation of the telephone industry, would recommend a company exemption rather than on the basis of an exchange.

You have a most devoted and efficient staff in the Washington office who have given you service far beyond the call of duty.

Your Employment Relations Committee have given generously of their time and effort in your behalf.

However, the final outcome of this matter rests in the hands of the people who operate the exchanges involved. We can plan, assist and direct your efforts but the final effort must come from you. I hope you realize the seriousness of this situation and that you will immediately commence work to protect not only your industry but yourself.

TELEPHONE MERCHANDISING

Continued from page 32

best we can provide, than of those that have already been built.

Let me sum up in this way:

The key word of merchandising is planning—and the first step in this plan would be knowledge—

Knowledge of where our market is, and its size,

Knowledge of what is required to serve it, and when,

Knowledge of all that this implies in terms of materials.

The second step is to translate mar-

ket information into design and style and procurement.

And the third step is the offer—to advertise, to promote, to sell.

We are well on our way to having service in every home and making it possible for any home to dial any other through direct distance dialing. And, as we eliminate the multi-party residence line and the so-called rural line (which we must do), we shall find that the use of the service—which, after all, is the real test of its value— its use for both neighborhood and far away places, will increase by leaps and bounds. We could do much to bring this about quicker and more surely if we plan for it.

As we look at the way this country has grown, at the trends of the future, and at the way our citizens demand the conveniences of life—and as we realize that our services, communications, are the heart and the spark of all this growth—then we realize the full importance of the responsibility we jointly have to furnish the best service within our power to provide. At the same time, what a tremendous opportunity—an opportunity not only to serve the whole nation, but a chance to serve it better and more completely than ever before. Our aim must be the best possible service. Our merchandising efforts should be directed there.

YOUR DATE WITH DESTINY

Continued from page 35

by statistics—forgetting the human element.

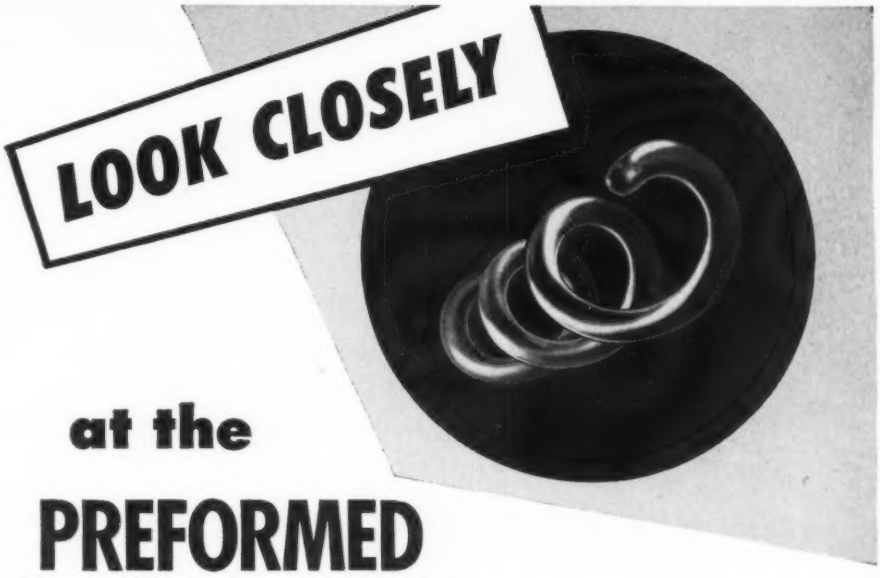
You now ask, "Did it pay its way?" We felt many of these rural lines did not pay their way, but we knew they would eventually pay dividends. Just listen. The government has not built one mile of competing line in our territory. We serve every rural electric cooperative in our territory.

Does this deep and abiding interest in the welfare of our rural areas pay? Let me give you a little human interest story.

Government Encroachment

In Jackson County, Arkansas, one strong rural electric cooperative determined to create a public utility district to condemn and take over all the electric property in that county. Our property wasn't for sale. The issue went to the ballot box. We had to go to the people. The co-op had the backing of the public power proponents of the nation—all the way from Washington down to Newport, Ark.

At 7:30 every morning, when you turned on the radio, the announcer

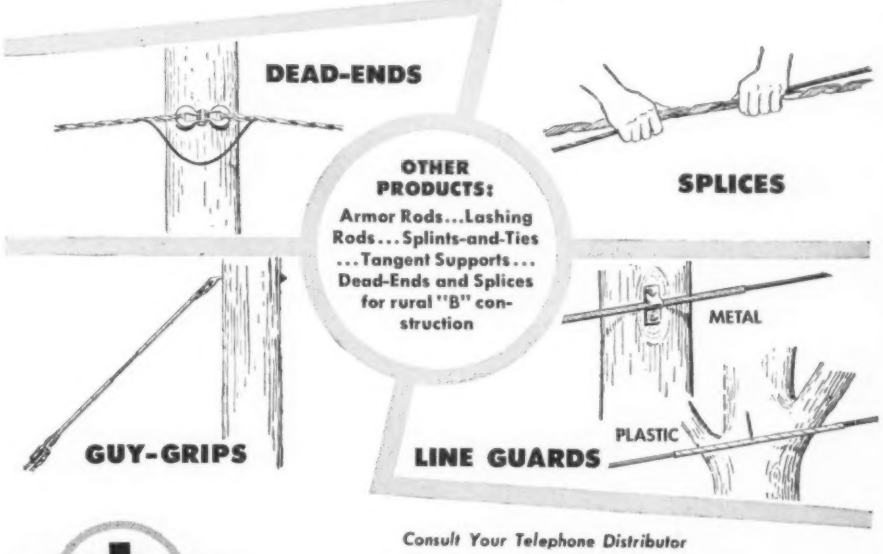


a major advance in line accessory fittings

The Preformed method of producing line accessories is an exclusive new development for the telephone industry. It incorporates the use of Preformed Rods—helically formed within exacting tolerances—to serve varied "fitting" functions all along the line. No more bolts—no compression tools—simplified construction. More than just something new, Preformed Products represent a better, faster and more economical way to *dead-end, splice, support,* or *protect* conductors and strands.

For more information on their exclusive advantages, consult your telephone distributor.

A COMPLETE LINE FOR THE TELEPHONE INDUSTRY...



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would say, "The next voice you will hear is the President of the United States." Then President Truman would come on the air for the purpose of influencing the people of Jackson County to vote for that public utility district. Then, the announcer would say, "The next voice is the Secretary of the Interior in Washington." Then, again, "The next voice is that of Sen. Lister Hill of Alabama"—all pleading with the people of one Arkansas county to vote for a public utility district to condemn and take over private property.

I traveled every highway in that county, visited many homes, and went out to the fields and helped pick cotton. Our boys had previously helped organize 14 rural development programs in this Jackson County. Those people did not care anything about Hamilton Moses, but they did recall that the power company men had helped them set up their community development program and had worked with them in various community undertakings. Yes, this work and these rural lines paid off in a big way. The people of that county voted 4½ to 1 against the public utility district, regardless of Sen. Lister Hill and Secretary Chapman and even President Truman.

Tennessee Valley Authority

You talk about trouble. How would you like to be in Arkansas' shoes? There sits that inland state — with Texas and all of its bragging on one side, and the Tennessee Valley Authority, with all of its boasting and preferences, on the other side—Texas, with all of its wealth of black gold, and Tennessee, with all of its federal preferences and cheap power rates, financed by the tax-payers of the nation!

For a number of years, the Congress has been appropriating from the federal treasury some 2 to 7 million dollars per year as a special development fund for the Tennessee Valley. A Chattanooga newspaper quotes Chairman Clapp to the effect that if this fund is denied, some 344 employes, devoting their time to the development of that territory, must be taken from the payroll.

Why should the federal treasury finance the expansion and development and betterment programs of one area in preference to the other sections of the nation?

TVA Does Not Pay Its Way

TVA's continuous deficit—these red figures—this interest—these forgiven taxes—are all being passed on to the other taxpayers of the country. This constitutes a distinct discrimination against every other section of America.

Any member of the Congress who continues to vote TVA funds—without providing that TVA pay its own way —pay taxes just like other utilities, and a reasonable rate of interest to the government for the funds actually devoted to the power business—is driving a nail in the industrial coffin of his own state.

Leadership's Responsibility

Let's ask ourselves some pertinent questions. Have we been giving too much attention to material things—to bales and barrels—to bushels and bayonets—to greed and to gold? Have we given too little attention to the urge of the human soul? Have we ever realized that battles are fought and won in the spirit of man? How are we going to answer Mr. Average Man's common call for an ever larger share in the ever-increasing benefits of our proudly boasted American Way of Life?

This is a brief story of the citizenship effort of one little company in helping a people build a state. Maybe this little story will challenge some of the great big concerns of the nation to undertake greater citizenship efforts in providing zest and hope for the life and lot of the average man.

I wonder how many of the tremendous concerns represented here today have any active interest in local citizenship activities—in state development organizations — in community-building programs — in the various states in which they operate?

I wonder how many of you have ever even discussed with your own family our Declaration of Independence and the Bill of Rights—those basic charters of American liberty?

I wonder if any of you companies, or you top executives, have ever made any personal sacrifice in an effort to sell this way of life—this method of doing business under which you have builded the greatest production on all the earth, to your employes—or to your high schools and colleges—or even to your own families?

I wonder if we are selling too much the bigness of business rather than the goodness of business? I wonder if we are selling too much our profits from the business rather than its benefits to the citizen? Mr. Average Citizen hears about one company doing a 10 billion dollar business in one year—about top executives drawing tremendous salaries. Is it not natural for him to ask —"Am I getting my share of all this prosperity? If these big folks do not care about us average citizens, will we have to use our own power?"

I wonder if any company represented here would even consider giving a job

to a man over 45 years old? I wonder if anyone here will consider working out some job for any of our physically handicapped—or do we just turn them out on a cold world, and then complain because we have to pay taxes for old age pensions?

When any nation values anything more than a deep and abiding interest in the welfare of its citizens, its future is insecure. We can't continue to compromise. We can't take a half-loaf. This policy brought Europe to Munich and America to war. Democracy means nothing to a hungry man. Economic freedom starts and stops with a job. To be politically free, man must be economically free, and that depends on you. Our democracy will work for us when we work for our democracy.

There is a way out. Not through politicians — not through Washington nor any state capital—not through government — but through you big, fine business leaders that really care. You face your life's greatest opportunity—a continuing challenge—which, if undertaken boldly and with clear thinking, can produce a new social and economic era for our people.

Everything you hold dear is in the balance. There are loose in this country today two conflicting theories of life and of living. They are at each other's throats. Both cannot survive. It is history's most decisive battle for the hearts and minds of men.

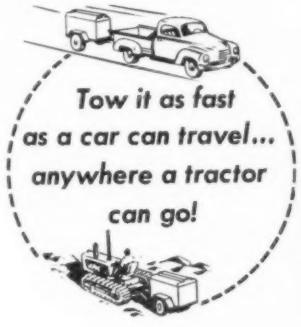
The time has come for every man to stand up and be counted. Many of your greatest minds believe it is later than you think. The time has come when you cannot be fish and fowl at the same time. You cannot be hot in the morning and cold in the afternoon. You can't tolerate and endorse government in business, in competition with private industry—and at the same time claim that you are an advocate of private enterprise—and maintain your own self-respect.

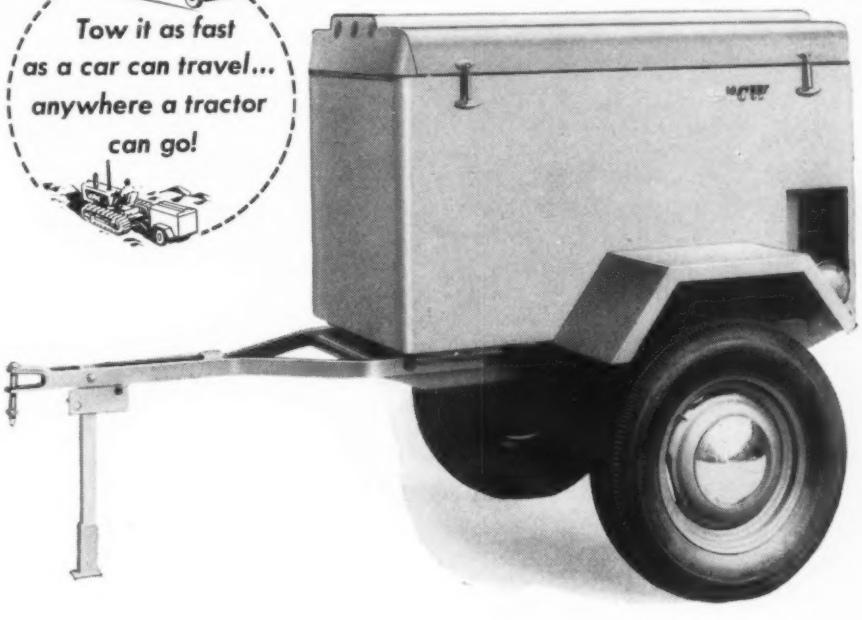
In the presence of this great company, I am reminded of a story of Thomas Jefferson, one of the founders of our Democracy. Jefferson wrote his own epitaph and gave it to his daughter, Martha Randolph, just two days before his death. He said he did not want one word changed.

The epitaph reads: "Here is buried Thomas Jefferson, Author of The Declaration of Independence, Author of the Virginia Statute for Religious Freedom and the Father of the University of Virginia."

He had been a member of Congress and governor of his state and minister to France and secretary of state and vice president and president of his country. He does not mention any of

NEW Powerhouse on wheels!





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More plug-in power for construction work . . . higher mobility for emergency standby applications! On construction jobs where high-line power is not available, the Onan "CW" gives you abundant power for all your electric tools, equipment and lights. Now you can use one unit (in place of several smaller portable plants) reducing servicing time and maintenance costs.

Onan "CW" Electric Plants are unusually compact, quiet-running and economical to operate: weigh only half as much as water-cooled plants of the same capacity. Powered by Onan two-cylinder, suction-air-cooled gasoline engines built with massive, long-wearing parts for continuous, heavy-duty service. Fully-protected by heavy-gauge steel housing; stay on the job in any weather.

Wide range of accessories make the "CW" more versatile

You can equip your "CW" Electric Plants for any type of portable service with a wide range of accessories including skid, battery rack, 9-gallon fuel tank, weather-proof housing, two-wheel trailer, or 4-wheel, rubber-tired dolly. *Put one of these portable, high-capacity units on your job now!*

Onan builds electric plants for every need—400 to 50,000 watts

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For greater uniformity... greater rigidity!

Now...Chance Pike Poles are made by bonding together carefully selected Douglas fir boards. Laminated Pike Poles have many advantages over the old, single board pike pole. They're more rigid. They're more uniform. Each board reinforces the other.

SAFETY PIKE — *Point can be reversed as shown in circle, for safety in handling and transporting between jobs.*

PLASTIC PROTECTED

Chance *laminated* Pike Poles are available with tough Maplac plastic coating. Splintering of the wood is eliminated. Lost-time hand injuries, caused by splinters, are avoided. *IT PAYS TO BUY HIGH QUALITY IN A PIKE POLE.* Only on a Chance pike pole will you find the steel reinforced butt which protects the end of the pike. And only *laminated* Chance pike poles are available with Maplac protection.

Write for the full story today.

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these things. He told his daughter why. Here is what he said: "The things in this epitaph are the things I did for the people. The other things not mentioned are the things my people did for me."

I have tried in my simple and humble way to challenge the high citizenship and the deep patriotism of the great industry you so fully and finely represent. The people of America look up to you. They have great faith in you. They have a right to expect much from you.

REPORT OF USITA PLANT COMMITTEE

Continued from page 36

discuss any problems with anyone of the Plant Committee members, we will be available during this convention, and if any one member is not able to give you a satisfactory explanation or answer, no doubt the matter will be brought before the Committee as a whole by him, and an answer provided in due course.

If at any time any member of the committee or sub-committees can be of help to you, I am sure you will find these men most willing and cooperative. In the selection of these members we tried to obtain them from all parts of the country so that some member is not too far from your location. Many of these committee members have been helpful in their state association conventions.

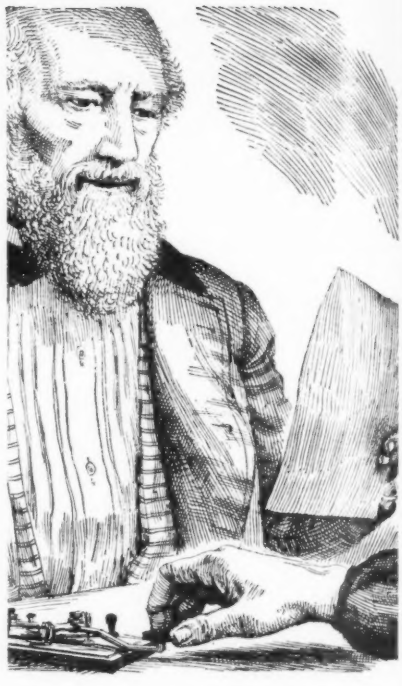
ACTIVITIES OF USITA RADIO COMMITTEE

Continued from page 40

occasion again to draw attention to the fact that in the public interest and without any capital expenditure by the Federal State Market News Service, the required service can be rendered without any undue hardship by leasing wire facilities from common carriers.

The commission also stated that its action does not prejudice the establishment of a microwave radio system to be owned and operated by the state of California (Docket No. 10777). On the basis of its recent order in Docket No. 10200, the commission is apparently of the opinion that the establishment of the California microwave system, if and when it takes place, will be in the distant future and, therefore, developments will be carefully watched by the association.

(4) *Minute Maid Corp. Petition to the FCC.* It has recently come to our attention that a petition of a somewhat similar nature to that covered in the previous paragraph for California has



Sending the first transcontinental telegram

One of the epic achievements in American communication history was the completion of the first transcontinental telegraph line in 1861.

It was thought it would take ten years to complete the line, but Western Union amazed the nation by finishing it in three months and twenty days. The lines were joined at Salt Lake City on Oct. 24, 1861. The first transcontinental telegram was sent by Stephen J. Field, Chief Justice of California, to President Abraham Lincoln, expressing the loyalty of that state to the Union.

The first Hemingray Glass Insulators were made in this same era. Through constant research and development they have kept pace with the communication systems of the world.

If you need an insulator for a communication job—it's in the Hemingray line. Most jobbers carry complete stocks. Write for free descriptive catalog. Kimble Glass Company, subsidiary of Owens-Illinois, Toledo 1, Ohio.

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been made for the state of Florida by the Minute Maid Corp. This company is engaged in the growing, harvesting, hauling and processing of citrus fruit in Florida and is applying to the FCC for permission to operate a microwave system involving eight widely separated points located in either Bell or Independent areas. With the understanding that the required facilities can be supplied on demand by common carriers operating within this area, this petition of the Minute Maid Corp. will be carefully followed through regulatory channels.

(5) *Proposed Rules for Private Use of Microwave Systems.* A meeting called by the FCC on Mar. 14 in Washington to discuss rules for regular licensing of private microwave systems was attended on behalf of the USITA by the chairman of the Radio Service Committee.

In the past, non-common carrier microwave fixed stations above 890 mc in the Public Safety, Industrial and Land Transportation Services have been licensed on an experimental or developmental basis, and the FCC was somewhat concerned with the heavy demand for frequencies in these bands without rules governing such use. Hence, the meeting of all interested parties to assist the FCC in arriving at suitable rules governing private use of microwave frequencies.

The meeting was well attended by representatives of prominent radio equipment manufacturers and organizations representing bus, truck, railway, power and pipelines industries as well as fire, police and others. Common carriers represented included the Bell System, Western Union and the USITA, each with one or more persons acting only in the capacity as observers since the bands in question are not assigned to common carriers.

From the standpoint of common carriers, probably the most important aspect of the proposed rules for the private use of microwave systems is "eligibility." In other words, if the microwave bands available for private use are to be assigned to all classifications of industry in addition to some of the larger users mentioned in the foregoing, two things are almost certain to happen.

One is that there will be competition in providing services that would normally be rendered by common carriers and secondly, the frequency spectrum available for private use will be rapidly depleted.

There was some indication that the FCC has in mind rules that would apply to a restricted number of private classifications and to specific services

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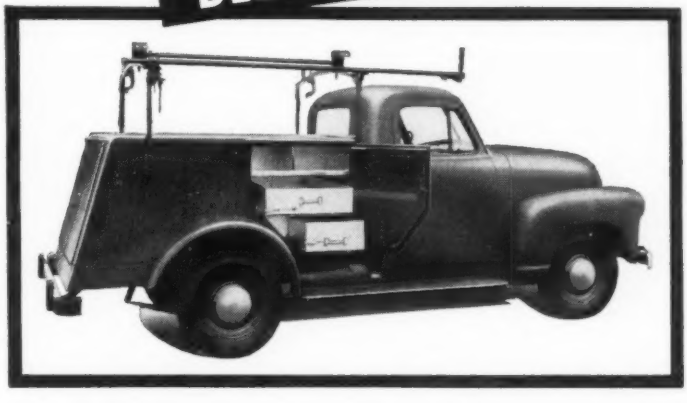

Right side view showing convenient material and tool compartments.

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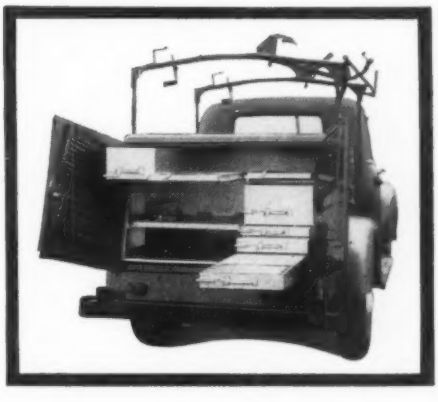

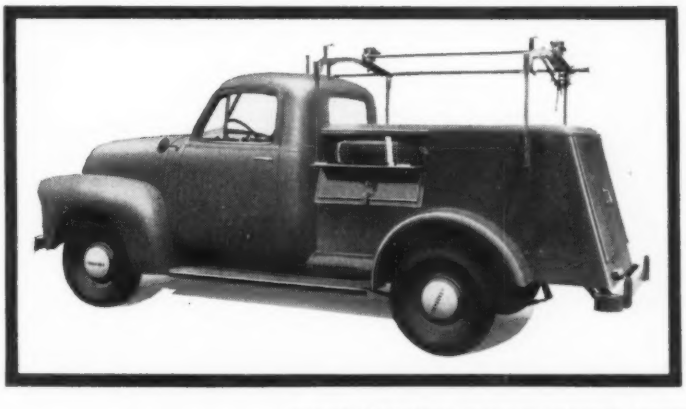

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Left side view showing readily accessible extra tire compartment.

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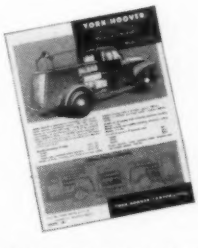

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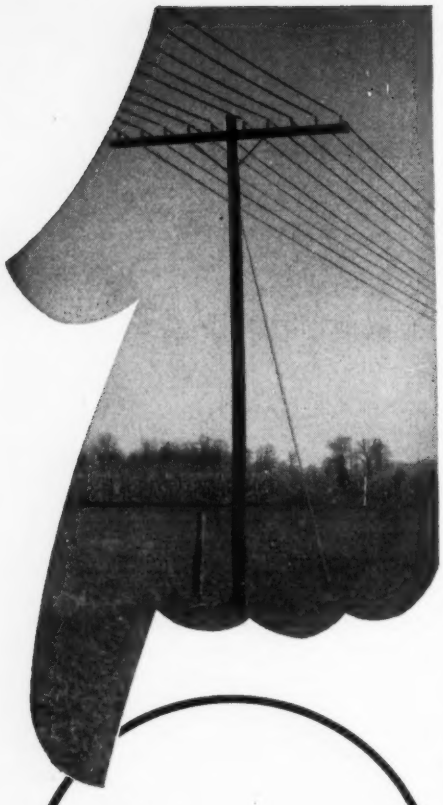

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The rugged tensile strength of *Crapo* HTL-135 and its heavy galvanized coating provide dependable and economical service life on typical rural lines.

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to be rendered by private microwave systems, but it was also apparent that this did not conform to the wishes of some of those present. To date the FCC has not issued rules governing private use of microwave frequencies.

(6) *Docket Nos. 9703 and 10742.* In the matter of revision of sub-part K of Part II, Rules Governing the Special Industrial Radio Services and Amendment of Section 2.104, Table of Frequency Allocations, of Part 2 of the commission's rules.

A statement was filed with the FCC on Docket Nos. 9703 and 10742 calling attention to the fact that Independent telephone common carriers are unable to qualify under common carrier mobile radio rules to serve their own vehicles in the construction, servicing, repairing and maintaining of telephone plant, or in engineering service activities, including field surveys required in the planning of outside plant.

This situation militates against the efficient performance of the public service duties and responsibilities of Independent companies. Specifically, it was suggested that telephone common carriers should be included in the classification of Special Industrial Rules along with other public service utilities.

(7) *Docket No. 10832.* In the matter of amendment of Parts 2, 3, and 4 of the Commission's Rules and Regulations and the Standards of Good Engineering Practice Concerning FM Broadcast Stations to permit FM broadcast stations to engage in specified non-broadcast activities on a simplex and/or multiplex basis.

A statement was filed on behalf of the Independent telephone industry by your association calling attention to the fact that various petitions have been filed in the past for common carrier assignments in the lower frequency bands and submitting that if full utilization could not be made by FM broadcast stations in the frequencies assigned for their use thus necessitating a reallocation of these frequencies, consideration should be given to their use by telephone common carriers in order to meet their essential service needs.

(8) *Docket No. 11164.* This docket covered proposed amendment of rules governing television auxiliary broadcast stations and would permit private inter-city radio stations to operate their own inter-city relay auxiliary instead of utilizing common carrier facilities for the stated reason of realizing reduced monthly mileage charges for television transmission facilities thus provided. The USITA Radio Service Committee assisted in the preparation

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If you want a cheerful fireplace fire you get this—

If you want to tie a package securely you get this—

and if you want to harmonize you hit this—

BUT IF YOU WANT THE BEST IN TELEPHONE CORDS
ALWAYS ASK FOR
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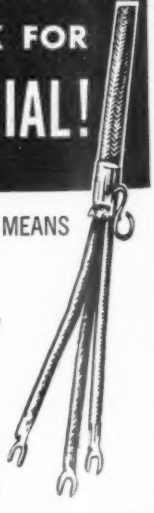

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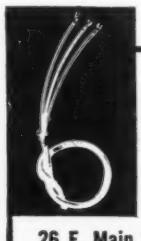

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of a statement opposing the proposed relaxation of the commission's rules.

(9) *Docket No. 11253.* This docket covered proposed rules to split the existing mobile channels in the 25-50-mc and 152-162-mc land mobile radio bands. This, in brief, would provide two channels for each channel now assigned but would involve some obsolescence in equipment if adopted.

The statement filed on behalf of the association (USITA) opposed band-splitting except as a last resort and then only to be carried out in areas where additional mobile channels were necessary, in order to reduce equipment obsolescence.

The statement stressed the need for additional mobile channels for common carrier public service as a prime consideration and the need to leave band-splitting for a later date after all frequency assignment possibilities are exhausted and when improved technique and equipment might be available to carry this out in a more efficient manner.

(10) *Dockets Reviewed.* In addition to the foregoing, Docket Nos. 11226, 11234 and 11279 were reviewed by the Radio Service Committee with no action recommended.

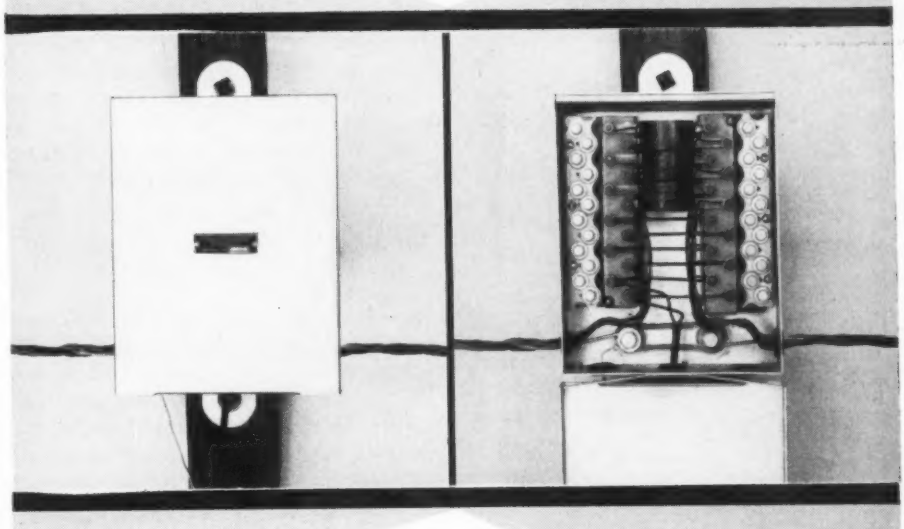
(11) *Carrier Co-ordination.* As previously reported, a subcommittee of the Radio Service Committee consisting of the chairman and two members were appointed by the association to consider the question of carrior co-ordination.

Due to the number of radio manufacturers with new carrier systems in the planning stages, particularly those designed for rural telephone service, there is a need for carrier co-ordination in order to avoid conflicts with existing systems.

At the present writing, all carrier manufacturers have been circularized outlining the problem and asking for pertinent technical details of existing carrier systems and those planned for the future. From the replies that have been received to date, it is indicated that carrier manufacturers realize the problem and plan to be cooperative; however, information to the contrary in which conflicts are indicated should be forwarded to the attention of the subcommittee.

In concluding this report, I would like to take this opportunity of acknowledging the aid and cooperation of the members of the Radio Service and Carrier Co-ordination Committees during the past year.

HERE IS OUR
TYPE
177
TERMINAL-LOADING CASE



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A cast aluminum combination terminal box and housing for loading coils. Designed to be used with the new rural distribution wire and available in 8 types to meet your requirements. Terminals are available with or without protectors and designed to accommodate loading coils of 88MH or 44MH inductance. Available through all telephone equipment suppliers.

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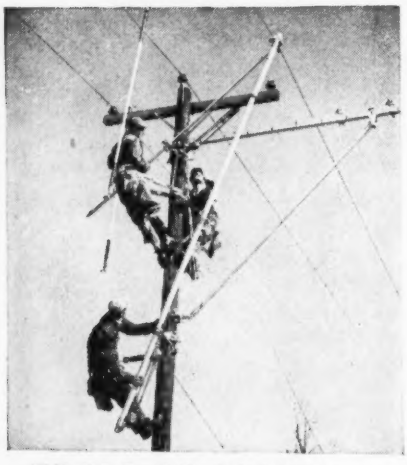

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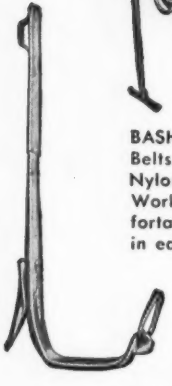
BASHLIN Quality Body Belts with the additional Nylon Safety Feature . . . Work Safely . . . Comfortably . . . with tools in easy reach.



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BASHLIN'S Nylon and leather Safety Straps . . . Bashlin Quality, of course.

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MICROWAVE FOR INDEPENDENTS

Continued from page 43

Fortunately, the more reliable microwave manufacturers and their distributors are willing to provide considerable engineering assistance in the planning, layout, and installation of their systems. Some manufacturers have an "Engineer, Furnish and Install" service that permits a complete system to be purchased from the manufacturer under a package plan.

This includes all the planning, engineering, furnishing of material (microwave equipment, towers, roads, buildings, etc.) and installation. The price of such a package is probably less than it would be if you engineered and installed it yourself—at least for the first few systems or until your engineers have had some radio experience. You can even include the training of your operating and maintenance personnel in the package. With such assistance from the manufacturer, almost any telephone company can afford to make good use of microwave.

As a final word of caution, I would like to point out several factors which should be a vital part of your decision on the type of microwave equipment to use. These factors are intangible. They are concerned with the microwave supplier more than with the equipment itself. They can be partially determined by checking with other companies that have had experience with the particular type of microwave you are considering. They can also be determined from your own knowledge and experience in dealing with the various suppliers of microwave. In considering any type of microwave, ask yourself these questions about the manufacturer and his distributor:

(1) Are they reliable? In other dealings with you have they always shown they have the best interests of your company in mind?

(2) Are the manufacturer and his distributor experienced in telephone requirements? Some manufacturers build their equipment primarily for industrial or other markets and have not attempted to build microwave equipment designed specifically to be integrated into the telephone plant.

Equipment designed for industrial use, though often cheaper than telephone type equipment, is seldom really less expensive because it may not be completely satisfactory for toll use. Microwave equipment is available from manufacturers who have designed their equipment specifically for the telephone company toll plant. Everything in their equipment, from the manner of rack mounting to the instruction books, drawings, and descriptive literature,

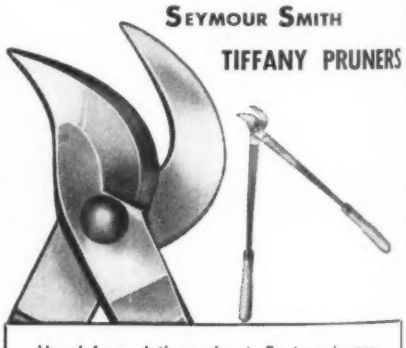
Do More With Less Help!

SEYMOUR SMITH TELEPHONE PRUNERS

Illustrated above is No. 11 Tree Pruner with center cut action by tempered steel blade that easily handles 1" branches. Head is reinforced malleable iron. Spruce poles with telescoping aluminum joints. For heavier work No. 12-18, capacity 1½". Also Pole Saws.

for clearing brush . . .

SEYMOUR SMITH TIFFANY PRUNERS



Hand forged throughout. Fast and easy double cut action with thin blades shaped to "draw in." Improved bolt and nut joint, through handle and riveted grip fastening.

FAST-CUTTING SAWS

Blades of Swedish charcoal steel. Large, deep teeth with heavy set to prevent binding. Hand and Pole models for all work up to chain sawing.

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has been designed for your use. This equipment may cost a little more in the beginning, but it should make up the difference in lower operating and maintenance costs.

(3) Does the manufacturer stand behind his product? Despite any guarantee he may give you, does he have a reputation of working with the customer until the customer is satisfied?

(4) Are the manufacturer and his distributor sympathetic to your problems? Too many manufacturers and distributors are out to sell all the microwave they can without caring whether you need it or not.

(5) An important final question some of you should ask yourselves is: "Do the manufacturer and his distributor sell to your customers without first consulting you?" Some manufacturers are so eager for sales they will come into your territory and compete with you in providing private or leased communications facilities. Reliable manufacturers, however, respect your operating territory and will sell to your customers only through you or with your consent.

Some of these customers are now coming to the telephone companies to take over these services after they have found many cost items were overlooked in the original planning, such as replacement of equipment, taxes on investments, and good maintenance.

A word of warning in taking over these services—you may find you are taking over a radio system instead of a communication system. As a word of explanation, many of you have heard radios in cabs, police and law enforcement agencies, and have tried to distinguish what was being said. In most of these systems it is impossible to recognize the speaker's voice. In telephone communication systems we should always strive to meet the standard signal-to-noise ratio as well as established transmission levels.

The answers to these questions are very important—often more important than the details of the equipment itself. Choose a manufacturer and distributor you can rely on and you will have little to worry about in the planning, buying, installation and operation of microwave systems.

FIELD USE OF NEW DEVELOPMENTS

Continued from page 50

(6) No special balancing networks required.

(7) Less maintenance required to operate.

The use of the negative impedance repeaters in some cases can provide a saving in outside plant by the use of smaller gauge cables and/or the elimination of loading coils. They are being used to provide satisfactory transmission on foreign exchange and private lines now sub-standard but which previously could not justify the expense

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(polyethylene based)
INSULATING TAPE

- Quick and easy to apply
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- Insures permanent moisture seal
- Has superior electrical insulating properties
- Remains flexible, even at extreme low temperatures
- Lasts as long as the cable insulation
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  —no deformation
  —no deterioration

Bi-Seal is accepted by the Technical Standards Committee (telephone) of the Rural Electrification Administration for splicing thermoplastic insulated, thermoplastic sheathed telephone cable. As per REA STANDARD PC-2 and PC-3.

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OCT-O-DUCT's flat sides, convenient length and diameters, and its outstanding electrical, chemical and mechanical characteristics make it the natural choice for complicated set-ups like this, where installation speed, economy and long life are essential.

To find out how OCT-O-DUCT can save *you* time . . . money . . . work, send for *Specification Bulletin 54-A*, and *Installation Manual 54-B*.

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of repeaters. Independent telephone manufacturing companies are now able to supply this equipment and detailed technical information on the theory, operation and application may be obtained from them. *Fig. 5* illustrates in a simple schematic the principal features of the negative impedance repeater.

Interesting technical facts regarding the new repeaters are:

(1) Maximum gains are obtained with repeaters located at the transmission mid-point of a circuit.

(2) Greater gain can be obtained on non-loaded than on loaded circuits.

(3) Reduction in transmission loss up to one-half of the overall line equivalent is feasible.

(4) Repeaters are available in both the vacuum tube and the transistor type. The transistor type is powered from the 48 volt exchange battery.

The Silicon Rectifier

Startling news in the field of rectification is the recent announcement in the technical press of a new type of power rectifier element. This news is of interest to telephone companies as most telephone exchanges utilize one or more rectifiers for charging batteries and other purposes.

The new rectifier element is made of silicon and is characterized by its large current output and high cell voltage for unbelievably small size. The trend in rectifier design down through the years has been one of increasing power and decreasing size and simplicity. The old mercury arc rectifier is typical of the large complicated rectifying elements of former years. Developments of copper-oxide and later selenium elements reduced the rectifier in both size and complication. *Fig. 6* shows the relative size of the new silicon rectifier as compared to the present-day selenium elements.

However, the principal disadvantage of these rectifying elements has been their rather limited ability to handle the heat generated in the rectifying element which necessitates the provision of large radiating fins. They have also been limited as to their breakdown voltage and current handling ability which required that a number of elements be used in series or series-parallel combinations. However, these disadvantages were all matters of design and the rectifiers which have been produced and furnished to the industry have been very efficient and are giving excellent service.

Some idea of the exceptional characteristics of the new rectifying elements is shown in *Fig. 7*.

Principal features of the new silicon rectifier may be summed up as follows:

(1) Expected to have almost unlimited life span.

(2) Capable of operating at temperatures up to 400 degrees F.

(3) Unusually high efficiency (i.e., very little power lost as heat).

(4) Extremely small size. Two rectifiers the size of peas mounted on a metal cooling fin will furnish 20 amperes at 100 volts. This amounts to 2,000 watts—with only 20 watts heating loss.

(5) Compared to standard rectifying elements the new silicon unit will provide 5,000 times more current.

The new development will, in addition to providing a new and improved type rectifier for normal battery charging purposes, find application in other ways where direct current is essential or has advantages over alternating current.

Typical of these would be *brushless* ac generators in which the direct current needed for excitation would be obtained by silicon rectifiers rotating with the generator windings, simple ac to dc welders, magnetic amplifiers, variable speed motors, etc.

Prelashed Aerial Cable

Of interest to Independent companies is a new method of placing aerial cable now being used by Bell System companies. Known as "the pre-lashed method" it utilizes a special cable reel and strand reel trailer assembly which spins (prelashes) the lashing wire around the cable as it is pulled off the reel.

The cable is fed by each pole at the support height on special rollers consisting of two aluminum wheels with rubber facing. Pairs of pulleys are used at poles where there is an angle in the line. During the pulling-in process, brakes on the feed mechanism are adjusted to provide a tension approximating 1,000 pounds on the strand and 100 pounds on the cable. A schematic drawing of the pre-lashing mechanism as used by the Bell System is shown in *Fig. 8*.

To prevent the cable and strand from twisting around each other, a "leader" with hinged lead weights is used between the winch line and the cable as shown in *Fig. 9*. Such weights fold up and pass through the temporary pulleys and then return to their original position due to spring loading.

After the cable has been pulled in by this method, it is permanently attached to the pole at the winch end and then brought to proper tension at the trailer end. Linemen then transfer the cable from the temporary pulleys to regular supports using a special lifting tool.

The principal advantages claimed for this pre-lashing process is a saving

IMPROVE
YOUR OUTSIDE PLANT CONSTRUCTION WITH SUTTLE SERVICE

COOK 26 PAIR STRANTERM

The new Cook Stranterm is the only cable terminal that can be supplied with either plastic or lead sheathed cable stub and has an optional protection feature for pairs requiring dischargers.

Investigate the many economies and improvements that are now available when the new Cook 26 pair Stranterm is included in your outside plant construction.

Catalog No. 352-1360 (lead cable stub)
352-1362 (plastic cable stub)

COOK 11 PAIR STRANTERM

One of the smaller and outstanding members of the Cook Stranterm line is this 11 pair terminal, a truly important improvement in cable and drop distribution. Employing the same excellent design features as the 26 pair Stranterm, this smaller unit is a great asset for improving old and developing new outside plant systems.

Catalog No. 352-1211 (lead cable stub)
352-1250 (plastic cable stub)

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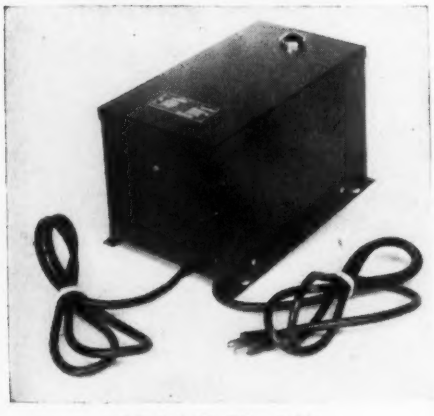
POWER EQUIPMENT

For

20 CYCLE

RINGING CURRENT



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Operates from lighting circuit

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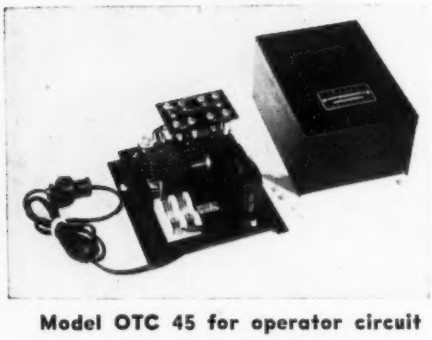

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in man hours and less mutilation of wood poles. The latter advantage accrues since with ordinary methods it is necessary to climb each pole three times, whereas with the pre-lashing method climbing is required but twice.

At least one manufacturer is gathering field test results on completely factory-assembled cable. The manufacturing process produces regular lead sheath cable with a polyethylene jacketing lashed to the support messenger with a wide flat tape. This type of construction has been in use for many years in the power industry where the support messenger also serves as the grounded neutral conductor.

For heavily wooded areas or inaccessible locations, the factory-assembled cable enjoys a distinct advantage. Whether manufacturing costs can be reduced to effect an over-all saving in labor and material, as compared to conventional methods of cable placement, has not yet been determined.

Digit Absorbing Advice

With many operating telephone companies facing the problem of how to work older forms of dial switchboard numbering into the 2 letter 5 digit national numbering plan, a recent development affords a unique solution. A universal digit absorber mechanism has been developed which is simple, workable and relatively inexpensive.

The converter, using standard telephone relays and components, is designed to convert existing dial switchboards from three or four-digit station numbering to uniform 2L-5D numbers required in the nationwide toll dial program and the eventual customer dialing program. The circuit is designed to operate in conjunction with any type of switching equipment that offers a pulse lead from the calling station.

Such circuitry will operate equally well within the trunks, trunk repeaters, incoming selectors, selectors or links, or at any stage where the pulse lead may be temporarily opened and closed for absorbing the unrequired station codes. It will absorb and cut through on any combination of digits, regardless of numerical order or repetition. The converter is rack mounted, fully wired and requires but four connecting leads per unit into the switchboard or other apparatus at existing points.

Some quarters hold that the toll train should be treated for 2-5 numbering at this time rather than the complete local or subscriber train. The digit absorbing unit performs equally well in a toll train conversion and does permit the operating company to feel its way into universal numbering a step at a time.

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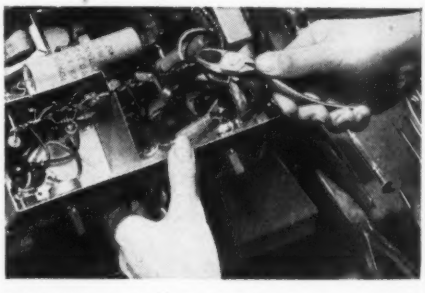
ADJUSTING—Highly skilled optical technicians use these UTICA® pliers to adjust extension lever in Kodak Bantam RF camera . . . to a tolerance of only .005 inches.



CUTTING—UTICA® 41-5 cutters in use on Kodascope Pageant Sound Projector. Accurate cutting of speed governor clutch spring in the Cine-Kodak Royal Magazine Camera assures protection of the sensitive governor adjustment. Replacements on 41-5's at Kodak are a rare occurrence.

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If extensive modifications are involved to secure digit absorbing switches or if one or more additional ranks of switches will be required to provide universal numbering, the digit absorbing unit described herein warrants consideration.

Resistance Design

Recent developments in telephone instruments paralleled with improvements in central office equipment make it desirable to examine the provision of exchange cable plant with a view toward utilizing design techniques which will give the most efficient use of copper and, at the same time, meet the necessary transmission requirements.

Two basic factors control the selection of cable gauges for subscriber loop facilities: (1) The transmission or talking limit, and (2) the supervision limit of the office.

Generally speaking, most of the recently designed telephone sets provide transmission improvements in the order of 5 db, over the older sets, for long subscriber loops. The supervision limit of most dial offices has been increased from 1,000 ohms to 1,300 ohms.

With the earlier sets, it was customary to consider the loop transmission limit, then to check to see that the conductor resistance limit had not been exceeded.

The efficiency of these new telephone sets is such that, even with the extended equipment range, the conductor resistance or office supervision limit controls the gauge of the pairs in most situations rather than the transmission or talking limitations, hence the term, "Resistance Design."

Resistance design employs the maximum allowable conductor resistance as the controlling value for gauge selection. This limit is usually controlled by line signaling, ringing, tripping, etc., referred to above as office supervision. At the present time, most dial central office equipment will operate or can be modified to operate satisfactorily over loops of 1,300 ohms without the addition of long line adapters or other special equipment.

Taking into account temperature variations, drops, load coils, etc., a conductor loop resistance design value of 1,200 ohms would appear to be satisfactory as a design limit for the average dial central office described above.

The most economical cable plant will result when the finest cable gauges are utilized. Mathematically, it can be shown that minimum copper for a given loop will be required and, therefore, the most inexpensive design will result when a combination of consecu-

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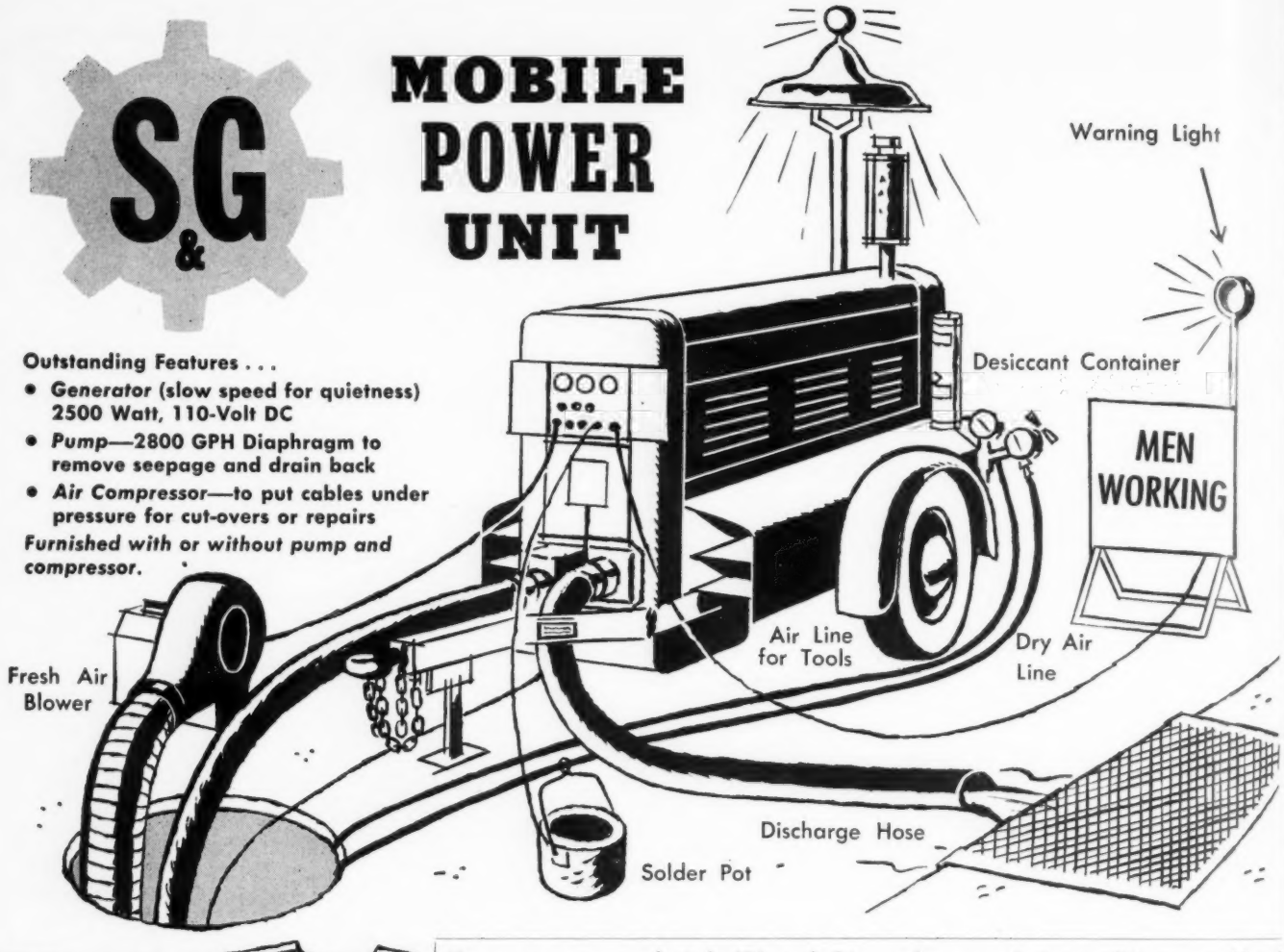

Outstanding Features . . .

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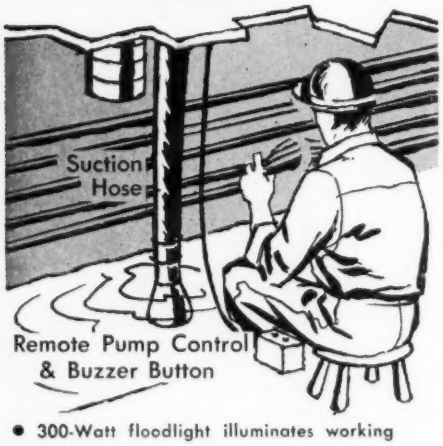
- ***Pump*****—2800 GPH Diaphragm to remove seepage and drain back**
- ***Air Compressor*****—to put cables under pressure for cut-overs or repairs**

Furnished with or without pump and compressor.



- 300-Watt floodlight illuminates working area
- operates soldering pot and iron, electric and air tools
- electric blower to ventilate manhole
- supplies dry air for cable cut-overs, flash testing, etc.
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tive gauges are selected (26 and 24, 24 and 22, 22 and 19) whose total resistance adds up to the loop resistance limit. Simple charts, similar to that in *Fig. 10*, can be utilized to select gauges for a particular lead.

Obviously, exceptions or modifications would be required in actual practice from the theoretical or ideal layout due to duct congestion, open wire, and the like. However, this does give one a guide in selecting cable gauges. Also, it would be unsound to select the gauge of a large size cable in the immediate vicinity of the central office on the basis of a few unusually long lines.

The practical approach would be to choose a point that would include, perhaps 95 to 98 per cent of the lines on the lead and design the cable plant to this point. Then make use of long line equipment on the few lines beyond this point that exceed the office conductor resistance limit.

The selection of gauge by the resistance method does not eliminate the need for certain transmission controls. After selecting the most economical gauge, two transmission controls are available: (1) The selection of station equipment, and (2) the use of loop loading.

[Station sets referred to are the latest sets which have improved receivers and transmitters capable of giving satisfactory performance with a current supply in the order of 20 milliamperes.]

[There are several loading schemes available. However, the one that fits the average situation to a greater degree is the H-88 system (88 millihenry coils spaced at 6,000 feet intervals with the first loading point spaced approximately 3,000 feet from the office.)]

While the following design controls will vary with different companies, a possible arrangement for an average situation is as follows:

(1) Specify the improved sets on all loops over 1,000 ohms from the central office. The older sets may be utilized between the office and this point.

(2) Provide loaded conductors on all pairs over about 21,000 feet.

For the extremely long loops, say beyond 1,600 ohms, local battery sets, negative impedance repeaters, and special long line equipment may be considered.

One-Way Radio Signaling

Several telephone companies have recently filed applications with the FCC for a commercial trial to determine customer acceptance of the new but fairly rapidly growing one-way radio signaling field. The selective-calling paging system contemplates the con-

struction of base transmitters, each with an effective range of approximately 4 miles, working together in a coordinated system to blanket the required service area. Subscribers carrying pocket-sized radio receivers are notified that they are being sought by telephone, and then either call their homes, offices, or other predetermined points to receive messages.

While there are a number of one-way signaling services now in operation on a common carrier basis by private operators, the unusual feature of the new system is the selective calling aspect. The heart of the system is a selective radio receiver about the size of a pack of king-sized cigarettes which allows the user to hear only his own signal—as soon as it is broadcast by a base transmitter—without taking the receiver from his pocket or listening through a cycle of codes to determine whether his own code is being broadcast, as is necessary with most present-day paging services.

The Bell Telephone Co. of Pennsylvania, in its recent FCC application, predicted great potential for the service and stated that the monthly charge for the pocket-carried radio would be $5.00, with no installation charge.

Conclusion

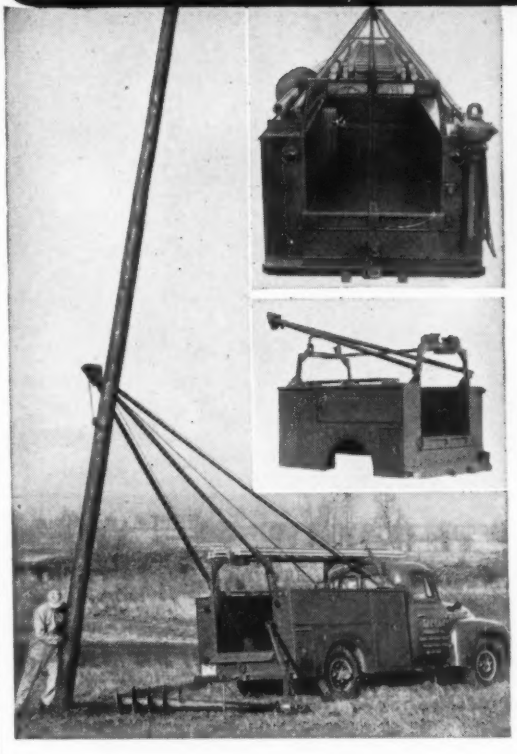
The items mentioned herein are of such a nature, that, in the opinion of your committee, they have had or will have a significant impact on the Independent telephone field. Space and time prohibit the inclusion of many other techniques and equipment which may be equally vital.

However, it is only from a diligent review of technical papers and trade publications that an operator can keep abreast of the constantly changing art of telephony today. No short resumé such as this can do justice to all the developments of a highly complex industry.

If there is a keynote to this paper, it can only be the effect of the increasing kinship between the electronic and telephone industries. Basic research, coupled with manufacturing know-how, has made possible a formidable list of items with which we can ultimately provide our subscribers a better grade of service for a lower unit cost.

Recognition should be given to the manufacturing research centers where practical solutions are provided for our operating problems. To provide such solutions in the form of new techniques and equipments, when the conditions and requirements are constantly changing, requires considerable acumen, foresight, conviction and capital. Our telephone suppliers have always been equal to the task.

Two-Man COMBINATION TRUCKS Pay Dividends



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IT'S A COMPLETE PACKAGE, tailored for your make and model of truck. Derrick, winch and digger drive are all assembled to the body, ready for your truck chassis. Easily mounted in a few hours by your local mechanic.

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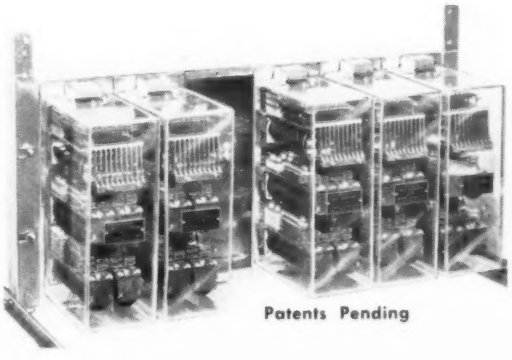

Patents Pending

- DIGIT ABSORBERS

For converting switchboards into full 2-5 numbering.

Ask for Bulletin No. 555

- CODE-TO-SELECTIVE CONVERTERS

Provides 10-party selective ringing. Use with present equipment.

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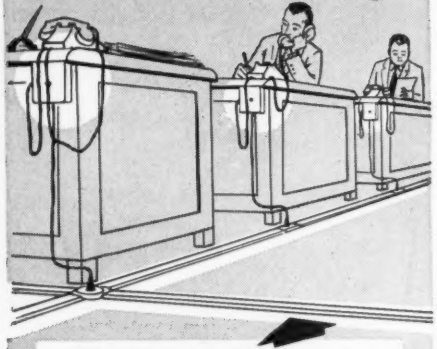
EVERY REQUIREMENT ANSWERED

. . . for adaptable telephone wiring with

PANCAKE

Overfloor Raceways



The increasing need for conveniently located telephone outlets in business and industrial buildings makes economical, flexible wiring layouts a necessity. Pancake is easily installed, extended or relocated . . . puts outlets *anywhere* they're needed. Heavy gauge galvanized steel and special "trip-proof" construction make Pancake the safest, surest way to carry telephone wiring to the point of use.

Pancake meets all code and telephone company requirements. Two interconnecting sizes meet all installation needs.

1582T Connector is used in conjunction with 1508T Bracket to attach B Station Tubing to desks or baseboards. Also used without bracket for attaching B Station Tubing to PANCAKE floor outlets.

For full information, write to Dept. T10

THE WIREMOLD COMPANY

Hartford 10, Conn.

Makers of:

Wiremold Surface Raceways
Plugmold Multi-Outlet Systems
Pancake Overfloor Raceways

PLANT TRAINING

Continued from page 57

The industrial relations director, or representative, closes the course with a talk on employe relations and presents awards of medit to the students.

The classes for this course are generally limited to a maximum of 10 students per class. Discussion questions are given to the students throughout the course to stimulate discussion, to emphasize important points, and to make certain each student understands what is being taught.

A final, written examination is given each student at the end of all major off-the-job courses and this grade along with the daily grades are entered on a "Student Report." Two copies are made, one for the employe's personnel file in the general office, and the other copy for the respective division plant personnel file. Both copies are passed to the general plant manager and respective general plant supervisors for their review and initials before distribution.

It is our opinion that much more could be accomplished by extending the duration of any succeeding classes in this particular course to 80 hours. This would allow more time for inexperienced personnel to understand everything that was covered.

The initial series of "Basic Station Installation and Maintenance" classes were completed in May, 1955. During the period August, 1954, through May, 1955, 28 classes were conducted and 290 plant personnel were instructed. In addition, 11 visitors from other departments and companies attended.

The second course in our training program, "Basic Central Office Maintenance" began in October of 1954. This is an 80-hour course designed to furnish necessary fundamental and general training for personnel who are required to install and maintain central office equipment.

This course consists of training in:

Electrical fundamentals, applied to central office equipment.

Operation of electrical parts and devices used in the telephone central office.

Operation and use of electrical instruments.

Operation of basic types of central office equipment.

Operation and adjustment of central office power equipment.

Complete operation (mechanical and electrical) of a step-by-step line circuit; grouping circuit; distributor; linefinder; selector and connector.

Operation and application of basic toll facilities and dial signaling circuits.

UNBEATABLE PERFORMANCE At LOW COST with the Sterling "PROSPECTOR" Earth Boring Machine

The "Prospector" Earth Boring Machine was especially designed for telephone companies. Priced to fit your operating budget. The Prospector digs holes and sets poles. It's performance will save you money on your digging and pole setting jobs.

The new Prospector is priced for you . . . only $3,650.

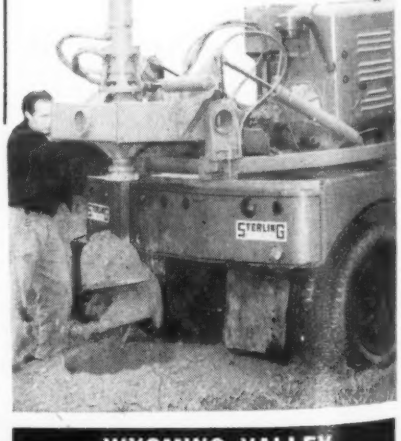
The Prospector Earth Boring Machine is designed and built to give maximum service. Its rugged construction and simple design means longer life and low maintenance. The Prospector earth boring machine gives maximum performance—digs holes in any soil. The two speed push button clutch lever permits changing speeds where digging becomes tough. The Prospector Earth Boring Machine digs in shale, and hard pan soils with ease. Speeds and position can be changed with no effort because the digger is hydraulically operated. All controls are easy to reach—one man operation. . . . Buy a Prospector Earth Boring Machine and save money on your digging and pole setting jobs.

You saw the Sterling "Prospector" displayed at the USITA Convention in Chicago—now call or write . . . arrange for a demonstration on your own digging and pole setting job . . . prove its performance to yourself. . . .

We offer a complete line of Diggers:

1. Sterling Model "A"
2. Sterling Enterpriser 6 Cylinder
3. Sterling Enterpriser 4 Cylinder
4. Prospector — built special for Telephone — R.E.A. and guard rail contractors.

Write for catalogue, prices and specifications.



WYOMING VALLEY EQUIPMENT DIV.

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KINGSTON, PA. Phone BUtler 7-3151

Transmission measurements.
Print reading.
Trouble analysis.
Accident prevention.
Routines.
Employe relations.

Briefly, the instruction in this course consists of:

Approximately 40 hours of lecture using special demonstration units, enlarged drawings, slide films, overhead projector, blackboard illustrations, and actual central office equipment.

Approximately 10 hours of audio-visual training utilizing 16 mm sound motion picture films.

Approximately 30 hours of classroom participation during classroom discussion and lecture periods.

The classroom is equipped with main-frame, storage batteries, constant-voltage charging equipment, generators, Subcycle, power board, interrupter, 50-line all-relay dial switchboard, step-by-step dial demonstrators, different types of electrical instruments and demonstration props, motion picture projectors, an overhead transparency projector complete with a large 10 foot by 10 foot screen for projecting schematic drawings of equipment during explanations, a 35 mm slide projector, blackboard, students' chairs, tables and workbenches, and many other items.

This course is still in progress. We have completed 17 classes; 137 plant personnel have attended, and we have had four visitors from other departments and companies. We expect to complete the initial series of these classes in November, 1955. The size of the classes is usually limited to a maximum of eight people.

The results have been excellent.

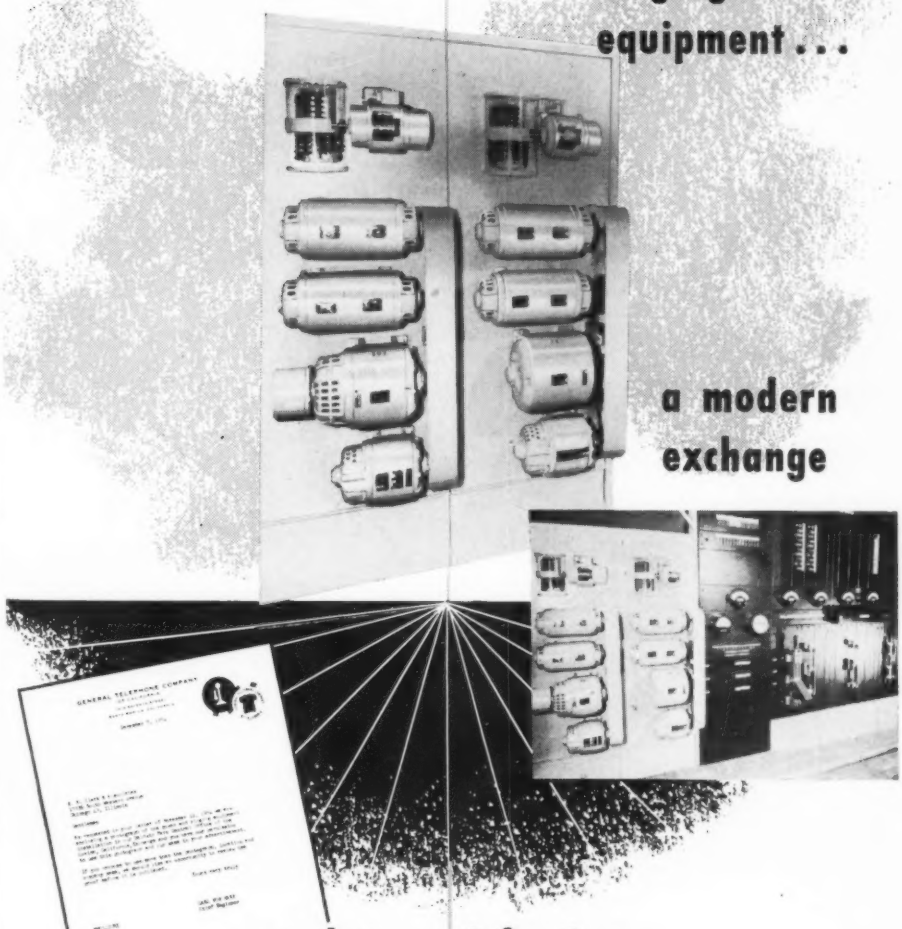
Preliminary classes in our "Basic Toll Transmission Course" were held in January and February of 1955. This course is designed to furnish necessary toll terminal training for personnel who install and maintain toll terminal equipment.

The course consists of training in:

Toll test procedure.
Electrical fundamentals applied to toll transmission.
Telephone transmission.
Toll terminal apparatus.
Toll circuits.
Electronics.
Fundamental operation of carrier equipment.
Carrier line-up.
Toll testing and trouble analysis.
Customer relations.
Accident prevention.
Employe Relations.

Instruction consists of:

ESCO VERTICAL ringing equipment . . .



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complete satisfaction

Keep ahead of constant pressure to modernize and improve service, while holding space and cost at a minimum. Install ESCO vertically-mounted power and ringing equipment, just as the General Telephone Company of California did at The Baldwin Park Exchange—

EXCLUSIVE ESCO FEATURES — *space-saving vertical mounting*, completely pre-wired to fit into power line-ups. *Advanced Interrupter design*, for accurate and positive timing. *Improved Idler Drives*, with single-point adjustment that stays, for smoother operation, longer life — plus lubricated for life bearings throughout, quality construction of every component. All rotating parts dynamically balanced, and each assembly fully tested.

Factory built to your particular specifications, ESCO Vertical ringing equipment is available in standard or special power ratings and frequencies to meet your present and anticipated needs.

Write today for full information.

ELECTRIC SPECIALTY CO.

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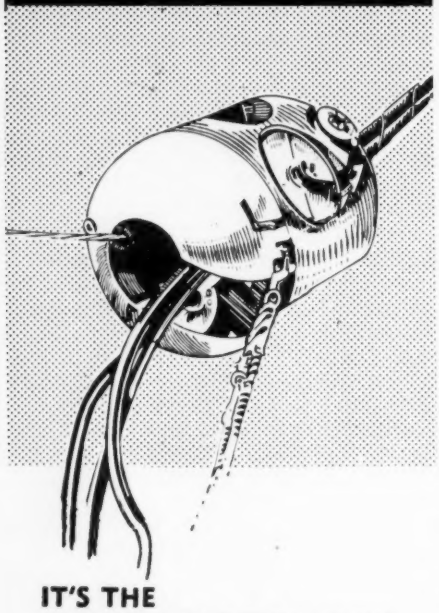
THREE TO ONE



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Only the
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ALSO SPINS SINGLE CABLE PERFECTLY

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About 30 hours of lecture using demonstration units, enlarged drawings, slide films, overhead projector, blackboard illustrations, and actual toll equipment.

Approximately 20 hours of audio-visual training using sound motion picture films and 35 mm sound slides.

Approximately 30 hours of classroom participation with equipment and in discussion periods.

The normal classes have from 6 to 8 people per class. Initial classes were of 80 hours duration; however, because of certain technical training involved, we plan to extend the course to 120 hours. When the course is lengthened, time will be allowed for carrier line-up, testing and fault location by every student. A number of films will also be added.

The classroom is equipped with carrier terminals: repeating coils; composite equipment; composite signaling circuits; vacuum tube demonstration board; artificial toll line demonstration board; blackboard; and testing apparatus.

This course is not in progress for two reasons. The "Basic Central Office Maintenance Course" is a prerequisite course to provide necessary training in electrical fundamentals before advancing to the study of electronics. Also, other training has been more pressing. We expect to resume this course in the first part of next year.

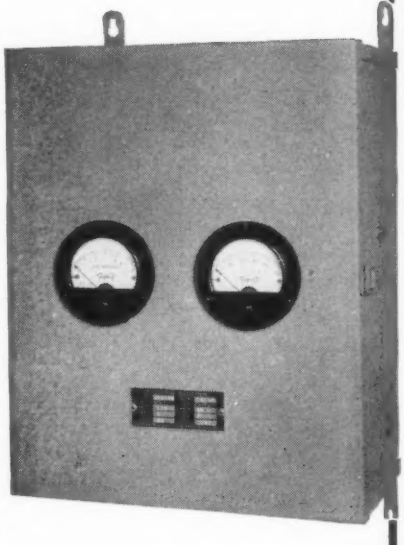
With centralized training, the out-of-pocket expenses (that is, travel, board, and lodging expenses) have cost us approximately $120.00 per man for the one-week courses and about $169.00 per man for the two-week courses.

The out-of-pocket expense invested in our classroom equipment is very moderate since most equipment used is from material and supplies and can be later reused in plant.

Some of the tangible results of our present Plant Training Program are:

- Improved job knowledge for plant personnel.
- Increased enthusiasm of our plant employes to learn more and their desire to do a better job.
- Improved methods for locating trouble.
- The promotion of better customer relations.
- Improved employe relations.
- The promotion of safety consciousness.
- The establishment of more consistent work procedures.
- An indication of how much training is needed.
- An improvement in plant performance and service.

Dependable Power
for Years-
and Years-
and Years-
of Service!



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ELECTROX
BATTERY ELIMINATORS
BATTERY CHARGERS

In sizes and capacities to meet every telephone power requirement.

See your Schauer Jobber.
Write for Bulletin 1465.

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SCHAUER
MANUFACTURING CORP.
4514 Alpine Ave. Cinn. 36, Ohio

A better knowledge of each employe's ability.

Minor off-the-job training is proving very helpful in providing training quickly where training is very urgent. Recently, we have completed two training schools in the field on a new twelve-channel carrier system, and an orientation course in central office switching equipment, prior to dial cut-over. Before the end of the year, we expect to complete two schools on a new four-channel carrier; and another orientation course on switching equipment. In addition, we will have a special course prepared on "Plant Customer Relations."

Next year, we plan to have courses in all-relay dial equipment, key telephone equipment, and instrument repairs, plus minor-off-the-job training in the field. In addition, we plan to offer basic courses several times a year, as required. Advanced, specialized courses in other phases of plant work will be conducted as needed in the classroom and in the field.

A successful program requires the enthusiastic and sincere efforts of all plant personnel along with the support of other departments concerned.

There is excellent training material available in books, magazines, motion picture films, slide films, etc., that can be used effectively by both large and small companies for training plant people. The cost of much of this material is moderate. Many films can be borrowed for short periods of time from larger connecting companies, or purchased through them.

The success of any company depends directly on the performance of its employes.

Effective training can do much to improve performance and reduce operating costs.

PLANNING TOLL DIALING

Continued from page 60

The general all-around technical abilities of the central office craftsmen have lagged behind the technical advances being made in the industry for at least the last 15 years. In effect, this condition is aggravated by the fact that the sound training in basic ac-dc theory, relay and mechanical adjustments, circuit logic and analysis, considered essential to good equipment maintenance prior to 1945, is noticeably lacking in the present day equipment maintenance forces. Such a condition is the product of many and varied factors and concerted effort should be directed toward achieving the highest plane of maintenance personnel education possible.

The NEW American Beauty Bantams

Cat. No. 3120 3/16" Tip Diameter 30 Watts

Cat. No. 3120-SCP 3/16" Tip Diameter 30 Watts

Not just another "bantam"—but a true American Beauty "Bantam" backed by the most famous name in electric soldering for over 60 years.

American Beauty "Bantams" feature:

- **Indestructible stainless steel casing that insures against undue loss of heat and keeps handle cool.**
- **Highest quality nickel-chromium heating element with genuine mica insulation.**
- **Tapered spool nose for maximum visibility and projection-free casing to assure easy access to hard-to-get-at places.**
- **Available in 1/8" and 3/16" tip diameters with either pencil type handle or standard handle and with long or short casing. Diamond point tip is standard—chisel type if specified.**

For the finest quality in ALL TYPES of Electric Soldering Irons—Check with American Beauty first.

AMERICAN ELECTRICAL HEATER COMPANY

American Beauty ELECTRIC IRONS SINCE 1894

148-H

DETROIT 2, MICHIGAN

WALK — DON'T RUN TO THE NEAREST TELEPHONE

. . . The WHEELOCK CODE CALL permits instant communication by means of audible signals, with personnel away from desks or with employees who normally cannot be reached directly by telephone. The busy switchboard operator just presses the button; a numerical *code call* sounds off throughout the building and the person being paged responds via the nearest telephone. Easy to install with any desired combination of chimes, bells, horns and other signalling devices.

just press the button!

Write for Bulletin 4B-4
Engineering Representatives in Principal Cities

Wheelock CODE CALL SIGNAL
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LONG BRANCH, NEW JERSEY

WAVE FILTERS AND OSCILLATOR NETWORKS FOR FREQUENCY-DIVISION MULTIPLEX SYSTEMS

Radio Engineering Products are leading designers and manufacturers of advanced-technique wave filters and bridge-stabilized oscillator networks for the voice-frequency and carrier-frequency ranges. These filters are mostly miniaturized in hermetically-sealed cases, and meet applicable military specifications. Standard units currently produced include those listed below. Delivery is from stock.

Service	Type	Function	Spacing	Range	No. of chans.
A-M Carrier-Telegraph	F2124	Send filter	170 cycles	255-4835 cycles	28
"	F2125	Receive filter	170 "	255-4835 "	28
"	F9610	Oscillator network	170 "	255-4835 "	28
"	F6131	Send filter	120 "	300-4980 "	40
"	F8261	Receive filter	120 "	300-4980 "	40
"	F9631	Oscillator network	120 "	300-4980 "	40
F-S Carrier-Telegraph, S+Dx	F11294	Send filter and oscillator network	120 "	3120, 3240, 3360 "	3
"	F11291	Receive filter and discriminator network	120 "	3120, 3240, 3360 "	3
"	F11209	Low-pass filter	—	0 to 2950 "	—
Carrier-Telephone (Type C System)	F15002	Channel filter	approx. 3 kc.	3-32 kc.	8
Carrier-Telephone (Type C System)	F15340	Oscillator network	approx. 3 kc.	3-32 kc.	8
Carrier-Telephone	F9511	Channel filter	4 kc.	4-36 kc.	8
"	F9520	Oscillator network	4 kc.	4-36 kc.	8
Carrier-Telephone (Type C System)	F2121	Line filter and balancing network	—	5-kc. crossover	—
Carrier-Telephone (Type C System)	F8910	Line filter and balancing network	—	3-kc. crossover	—
Carrier-Telephone (Type H System)	F1922	Line filter and balancing network	—	3-kc. crossover	—

We will promptly supply full information on these and other types on request.

RADIO ENGINEERING PRODUCTS
1080 UNIVERSITY STREET, MONTREAL 3, CANADA
Telephone: UNiversity 6-6887 Cable Address: Radenpro, Montreal
MANUFACTURERS OF CARRIER-TELEGRAPH, CARRIER-TELEPHONE AND BROAD-BAND RADIO SYSTEMS

The central office equipment being installed today is generally more complex than that encountered prior to 1948, with even the standard dial equipment components requiring more stringent adjustment due to the extension of station and trunk loops. In addition, many new electronic devices, common control switching equipments, pulsing and supervisory techniques, carrier, voice repeaters and similar apparatus are becoming quite common in present day Independent switchrooms. In the years ahead, an increasing number of new devices will appear which presently are only a gleam in the eyes of some bright young engineers.

In order to meet this challenge, means must be found to attract the proper type of personnel to the telephone industry. The responsibility of such a program must include the provision of sound training and the adequate experience essential for good installation, maintenance, engineering and successful operation of the present and future complex telephone systems.

In conclusion it should be stated that a considerable amount of valuable educational and engineering information has been published in Independent manufacturers' bulletin, AIEE papers, the *Bell Laboratory Record*, *Bell System Technical Journal* and the Independent trade magazines. This flood of information will no doubt continue for many years to come. In fact, the information on new developments is coming so rapidly that it is becoming increasingly difficult to read, analyze and catalogue for reference purposes the vast amount of applicable technical data that is being made available to the industry on direct current pulsing techniques, single and multi-frequency pulsing, carrier systems, repeaters, digital data transmission, micro wave, the various types of automatic toll ticketing systems and allied devices.

For the benefit of those persons actively interested in brushing up on toll dialing requirements, the following listed literature is recommended.

The paper titled "Nationwide Toll Dialing," presented by W. E. Baker at the 1951 USITA convention, presents the basic requirements and objectives in an excellent manner.

The AT&T Co.'s Notes on Nationwide Dialing together with the USITA Bell System Technical Committee for Nationwide Dialing minutes of Meetings 1 and 2 provides a wealth of information on technical requirements.

Valuable data applicable to small exchanges is also presented in the REA telephone Engineering and Construction Manuals as follows:

(1) Section 157 Customer Toll Dialing with Limited Networks
(2) Section 319 Inter-Office Trunking and Signaling
(3) Section 156 Nationwide Operator Toll Dialing
(4) Section 208 Numbering Plans
(5) Section 220 Traffic Agreements
(6) Section 218 Plant Annual Cost Data
(7) Sections 401, 410, 415, 421, 422 and 423 on Transmission Design
(8) Sections 501, 505 and 510 on Telephone Traffic Calculations

REPORT OF USITA TRAFFIC COMMITTEE

Continued from page 64

rence clause of their tariffs as they pertain to Bell rates. No decision has been reached as of this date.

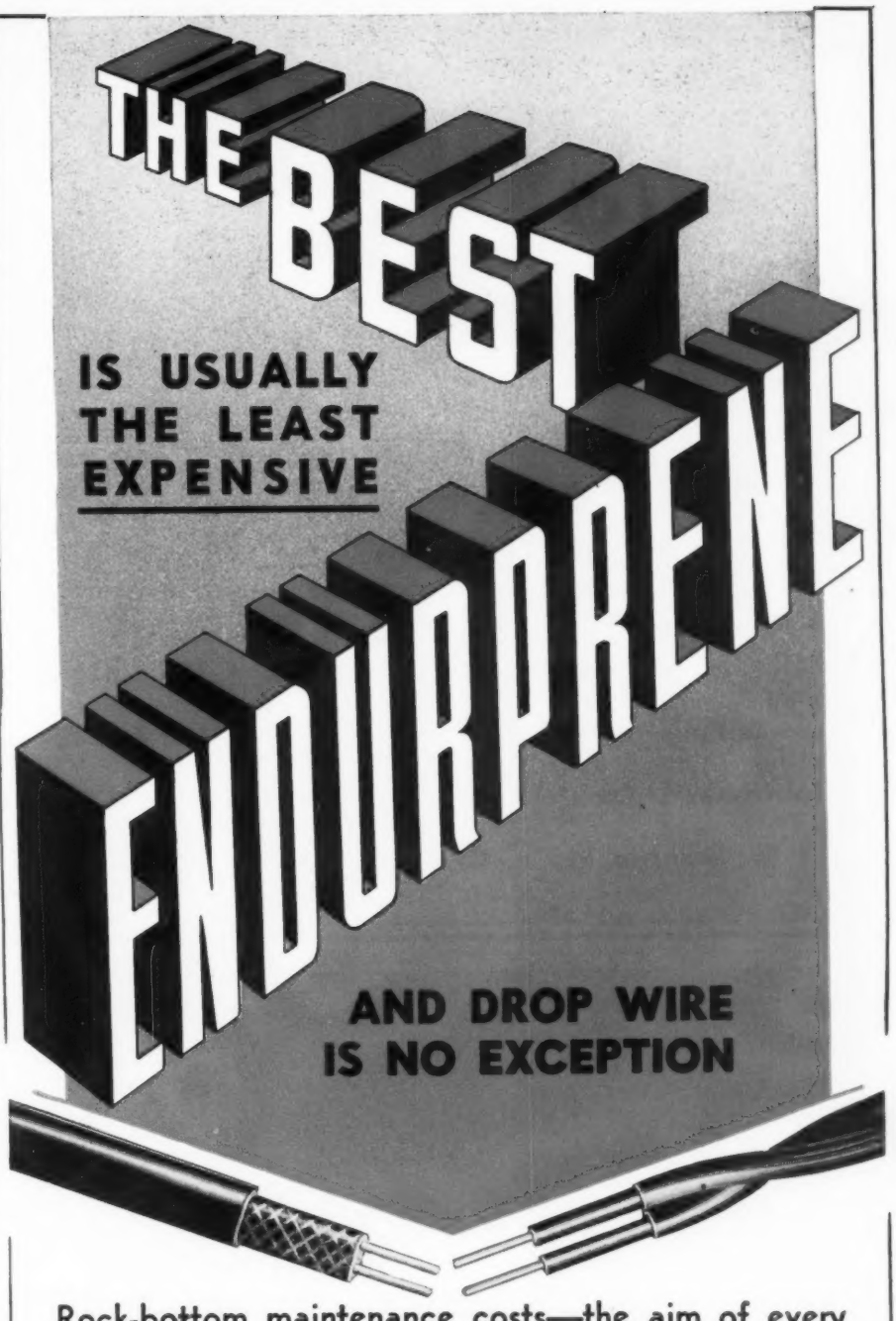
A meeting of the Traffic Committee was held in Chicago on May 24 to discuss plans for the fall convention and points indicative to its theme, "Service is our only means of progress." The members of the committee voted to go on record to define the traffic department as being responsible for "service" in the handling of calls whether manual or automatic.

To meet this responsibility it was agreed that traffic engineering should be made more generally comprehensive in determination of switch quantities and trunking. That it should supervise and direct the use of facilities by the establishment of suitable line assigning routines by traffic personnel. That it should have comprehensive service observing, means of evaluating customers' service in relation to "direct distance dialing," toll switchboard service observing for customer education in relation to faulty usage as well as that required in anticipation of conversions.

The Traffic Committee recognizes its responsibility to the industry in general to attempt to find solutions to problems of member companies in traffic matters. This is a service that has been available for many years but has seldom been used.

A general report reveals the industry has experienced an increase in toll traffic at an estimated rate of approximately 15 per cent over a year ago.

The Traffic Committee members appearing here today on the panel discussion and your chairman, met in Cleveland on Sept. 7 to formulate an outline for the discussion.



Rock-bottom maintenance costs—the aim of every on-the-ball plant executive—come when you buy the drop wire that stays up, year after year, storm after storm.

NEOPRENE!

Ask your own Kellogg man for the whole story. He will be glad to furnish you an interesting box of samples.

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Photo shows Pengo Duct Rodding Machine in use by major utility in the San Francisco Bay Area.

New PENGO Duct Rodding Machine will rod ducts to distance of more than 1000 feet!

For Telephone duct rodding • Electrical power duct rodding • Sewer pipe duct rodding

- Pays out, returns or holds rod steady without shifting or stopping.
- Reel revolves clockwise as it turns rod in the duct.
- Proved in actual use, one large utility company has rodded more than 13,000 feet of ducts in one day! Average Production, 1 Mile Per Day.

Made by the makers of the World-Famous
PENGO EARTH AUGERS

Write for additional information

PETERSEN
ENGINEERING COMPANY
Santa Clara, Calif.

EMPATHY OF MANAGEMENT

Continued from page 66

as operators and to take steps to avert failures in many cases as we study the cause.

(g) It develops within us all an empathetic attitude of immeasurable value—the feeling into—the ability to keep our thinking clear and true.

Does this plan have any effect on the service assistant's day-to-day job of division supervision?

No, not at all. She realizes that the incidental training and the day-to-day supervision of operators not assigned to her have a definite bearing on the over-all service in her division. Corrective action on an occurrence of discipline — handling of equipment — handling of a difficult call—assistance, directing traffic, etc., is the responsibility of the service assistant with any operator whether or not she is assigned to her. Therefore, her day-to-day job of supervision remains one of directing, supervising, assisting and developing of all operators. The development of her group of operators is in addition to this all. Each operator understands this and the respect and regard that has been shown in this phase of the Plan has been truly outstanding.

What part of the plan do we find the most difficult to develop?

We believe it is the art of interviewing. The ability to discuss rather than dictate. The ability to ask leading questions rather than to make a conclusive statement. The ability to recognize the individual characteristics in each and to work with each accordingly.

The ability to be an insider rather than an outsider—to "innerview" rather than interview.

You see, an observation is of value only if the approach and follow-through of the interview is based on human considerations rather than techniques. It is of value only if the results can be accumulated in terms of morale, job knowledge and skill.

The service assistants realize this and are concerned about the success of their interviews.

We believe one of the most successful mediums in helping the service assistant in addition to the daily assistance given by the chief operator, is supervisory conference. Here their problems are presented and all participate in the best solution. They learn from one another as they exchange ideas, express opinions and present actual instances. Supervisory conferences scheduled one each month are highly beneficial. They need be only

of two-hour duration — or four hours, if possible—but they are so necessary.

The importance of a good supervisory staff should never be taken lightly. They are the key people in training—in leading—in directing—in developing in any office. Find an office with high morale, freedom from tension, good work results and you will find a well-trained, deeply inspired supervisory force — a tribute to the chief operator and high recognition to her supervisory staff.

Empathy in management must have a definite place in all levels of supervision. The Operators Development Plan, we believe, is a wonderful start in the development of understanding and the ability that enables us to see issues clearly—to look at them without bias or prejudice. It calls for a lot of hard work but it is a challenge that neither you or I nor those who work with us would not accept. For the one meaning of empathy, "The power to sense another's needs and to want to help satisfy that need," is a part of every lesson The Master taught us as He lived leadership.

Monsanto Announces Pin Contest Winners

Monsanto Chemical Co. on Oct. 12 announced the winners of the contest to guess the number of Penta-treated insulator pins in a container.

Two guessed the exact number of pins (348). They were: Ralph Hurmence, plant supervisor of United Telephone Co. of Iowa, Newton, and Robert J. White, secretary-treasurer of General Telephone Co. of Michigan, Muskegon.

EXTENDED AREA SERVICE

Continued from page 72

is not too important since the revenue increases proportionately as greater stimulation is realized. The cost per message unit should decrease as volume increases. A combination of growth and stimulation can produce a very substantial increase in toll message volume in a comparatively short time.

Here are the results of a study on a typical case involving an exchange of about 2,000 stations located 10 miles from a large city. The number of messages involved is about 18,000 per month in each direction. The comparisons are with manual operations, and reflect only the small exchange part of the operation:

With an automatic toll ticketing installation and using a stimulation factor of 100 per cent, the change from manual operations would increase operating income by $23,250 per year after meeting annual charges on additional investment in equipment and trunks, but before income taxes.

If the stimulation factor were increased to 200 per cent, operating income would be increased $41,000 after meeting annual charges on additional investment in equipment and trunks.

With an extended area service arrangement and using a stimulation factor at 450 per cent, the change from manual operation would decrease operating income $18,800 after giving effect to the annual charges on additional local service revenue which regular rate brackets would produce.

This is a substantial difference in operating results. However, it is believed that this is a typical case, and that other studies of a similar nature will produce about the same result.

The principal factors considered in the study were as follows:

(1) The increase in toll revenue due to stimulation with automatic toll ticketing, or the decrease due to elimination of the toll charge with EAS.

(2) The increase in local service revenue which could be obtained with EAS.

(3) The reduction in traffic expense due to eliminating manual operation of toll traffic between the two points. This reduction in expense is the same for either plan.

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Controlled Quality

From the pine forests of the Southeast to the outbound loaded car, each step in Taylor-Colquitt pole production is subject to precise and accurate control.

These controls cover timber selection and pole manufacture as well as moisture removal and preservative treatment. Developed and refined during the 29 years that Taylor-Colquitt has been a producer of fine poles, they assure uniform high quality and consequent maximum life.

For poles with "controlled quality" specify Taylor-Colquitt treated pine.

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For Long Lasting Economical Service

HIGH QUALITY *Outside* WIRE and CABLE

TELEPRENE®
DROP WIRE

This famous Whitney Blake wire set a new high for service life. Available in twisted pair, parallel and twin constructions, with Copperweld or bronze conductors.

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UNDERGROUND WIRE

Low-loss transmission characteristics and stability in wet locations make this neoprene jacketed wire ideal for direct burial.

TELECABLE®
EXCHANGE AREA CABLE

For aerial and duct use. Polyethylene insulation and polyethylene sheath. Excellent transmission qualities. Cable will operate even if sheath becomes damaged. In all required sizes including 202 pair.

DISTRIBUTION WIRE

Available in 3, 6, 11 and 16 pair, completely color coded. Has polyethylene insulation — polyvinyl chloride covering over each conductor. Low-loss transmission, low capacitance, high dielectric strength and excellent weather resistance. Light in weight, self supporting, easily installed.

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(4) The reduction of operating costs due to elimination of the annual charges on the investment in manual switchboard and central office equipment. This reduction is also the same for either plan.

(5) The increase in operating costs due to the annual charges on the additional investment in trunk circuits, terminating equipment, switching equipment or automatic toll ticketing equipment as required by either plan.

It would also be well to consider the effect on the toll settlement of a change to EAS if the elimination of the toll charge is involved in a toll settlement with another company.

The study referred to, along with others has led to these conclusions:

(1) Automatic toll ticketing will prove in over manual operation and is practical even over 10-cent routes with a reasonable message volume.

(2) Automatic toll ticketing will give the customer about the same speed and convenience of service as has made EAS desirable.

(3) The over-all costs of furnishing direct customer dialing with automatic toll ticketing equipment will be substantially less than furnishing EAS in many situations.

(4) With EAS, the stimulation factor will increase costs without a compensating increase in revenue, and the greater the stimulation, the greater the potential danger of loss from this factor.

(5) With automatic toll ticketing, the stimulation factor will increase revenue at a rate greater than the increase in cost.

In addition to the factors I have previously related, an automatic toll ticketing installation in lieu of extended area service or in advance of full customer toll dialing could result in one of the following additional benefits:

(1) It could eliminate the necessity of adding manual toll positions at one or more of your offices.

(2) It could also eliminate a building addition where the existing building will not accommodate additional operating positions.

(3) Utilize circuit groups more efficiently by eliminating idle time due to manual operation and the further benefit of an instantaneous disconnect.

The final conclusion is obviously that before establishing an EAS arrangement, one should study an automatic toll ticketing installation very carefully. It may be a better solution of your EAS problem.

Growth of Power

"Public power allowed to expand and aggrandize is an inherent danger to popular government. . . . It is costly, unfair to millions of taxpayers, a system of bounty that could create the biggest bureaucracy America ever dreamed of."—*Industrial News Review.*

HAWAII-ITS SERVICE

Continued from page 78

kept waiting too long before their calls are answered, or if there is an excessive delay in obtaining information while the customer waits, this too is scored. We have found that the range of possible technical faults is wide. Shortly after we started observing the contacts handled by our service representatives, we were amazed at the many things which they were doing wrong.

In addition to observing the technical aspects of a contact, we also attempt to grade the manner in which a representative expresses herself. We determine whether or not her expressions convey a willingness to do everything possible to satisfy a customer's request—whether or not the expressions are appropriate and indicate interest and helpfulness. This phase of service measurement is referred to as "overtones." In developing "overtones" among our people, we have found it necessary to guard against a false tone which sounded "syrupy" and, therefore, unnatural. We try to develop in our people expressions which are natural and sincere.

From our observations, we compute the percentages of faults related to the total number of contacts in the sample. Then, by relating the percentage of faults to tables prepared in advance, we obtain a service index. Points are gained by keeping percentages of faults low. The "technical" and "overtone" service indices then become an important guide as to the quality of the job being accomplished.

From the results of this phase of our measurements, we have a basis for adjusting our training, our methods or our supervision to meet service objectives. For example, suppose we find that service representatives are misquoting certain rates or are not adequately explaining certain company policies. We then give special training covering these items.

In our Honolulu office, we have one full-time service observer who takes a sample from some 20,000 customer contacts each month. I realize that many business offices in the industry are smaller than our Honolulu office and that the expense of having a full-time observer would not be justified. We have this problem in our offices on all of the islands except Oahu. On these neighbor islands we have from two to five service representatives. Based on our experience in Honolulu, we have decided that some form of observing is desirable even in these areas and we are planning to have an observer visit

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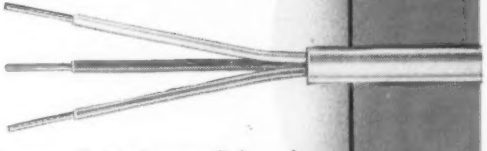

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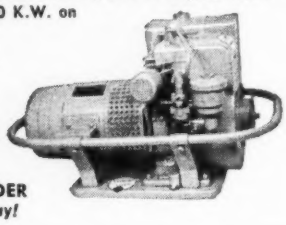

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the outlying offices periodically in addition to having spot checks made by the local supervisors. Here on the mainland some of you may want to consider combining forces and having one observer cover an area served by two or more companies.

After four years of quantitative and qualitative measurements in Honolulu, we believe we are doing a more effective job than we would have done had we not had these measurement plans. Through the work volume measurement plan we think we have kept our force at a minimum and by means of service observing we feel certain that we have improved our public relations.

We believe that everyone benefits from these measurement plans.

The customer—by providing him with better service.

The individual service representative—by developing a sense of public responsibility and pride in her job.

The business office team—by keeping it informed of the quality and quantity of its work and the trend of its performance.

The company—by knowing what kind of a job we are doing and pointing the way to improvements through better methods, better training and more effective supervision.

WHAT ARE WE WAITING FOR?

Continued from page 84

ern Bell Telephone Co., at Des Moines, Ia. First, they selected 14 typical farms in central Iowa, not the best farms or the largest and not the poorest farms—just average farms. They then sat down with the farmer and his wife and planned with them for a complete telephone service, all of which would cost no more than they were then paying for local service, during the eight or nine-month trial period.

In the house, each of the trial farms have from two to four extension telephones—the one in the kitchen was a must. They could select colored handsets, coiled cords, illuminated dial phones or any type of equipment they wished. If the farmer had a tenant house the same treatment was given there, except, generally, this service was on a smaller scale.

On the farm itself, a loud ringing bell or gong was installed on the windmill, on a yard pole or on a barn or other building. An extension was installed in the machine shed or shop where the farmer was likely to spend some time repairing his machinery, especially during the winter months. If the farm was a dairy farm an extension was installed in the dairy barn and milk house; if it was a cattle feeding farm an extension was installed at the silo or near feed bunks. On farms specializing in raising hogs an extension was installed in the farrowing barn and similar treatment was given on other specialized farms.

All of the telephones were provided with intercommunicating service and signaling was included.

Northwestern Bell is checking with these farmers from time-to-time to see how they are getting along and whether the telephones are properly located. The farmer is also cooperating by keeping a simple record or peg count of the calls he makes and the type of call, whether intercommunicating or outside.

At the end of the trial period the company will inform the farmer of the cost of the various services and he will then decide how much of the added service he wishes to retain.

I visualize this experiment as a means of opening up a brand new era in rural telephony. So far we have brought the telephone to the farmer; now, we can put the telephone on the farm. Maybe this experiment will only be a partial success, but it has taken about 15 years to electrify the farms of America and I don't think we should be discouraged if it takes us that long to sell the farmer on a complete telephone service.

If we are able to sell the farmer a complete telephone service and he expands his usage of our service, it would naturally follow that we would have to deload our rural lines to possibly four or five subscribers. This step would certainly be within the realm of possibility, for not only would our revenue justify such a change, but the farmer would be getting a higher grade of service and a service for which he would likely be willing to pay a higher rate. Enlarging the general usage of telephone service on the farm may possibly be the means of making rural telephone service a profitable item in our operations.

A good axiom to remember in dealing with selling and expanding the market for our services is "in order to influence man you must please him." Markets are made up of people, not statistics or graphs. We are dealing with people and they must be sought out and pleased—one at a time.

I like Earl Prevettes' tribute to salesmen, when he wrote in his book, *The Power of Creative Selling:* "You, America's salesmen, must continue to tackle tomorrow's frontiers and blaze the trail of progress with your traditional vigor and determination. With patience, pluck, and persistence, en-

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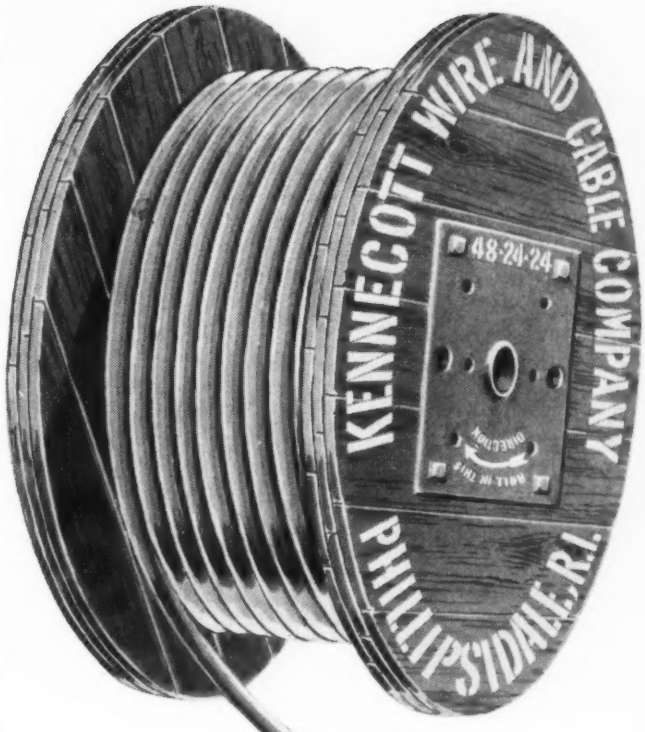

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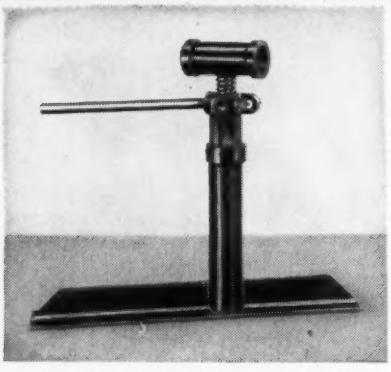

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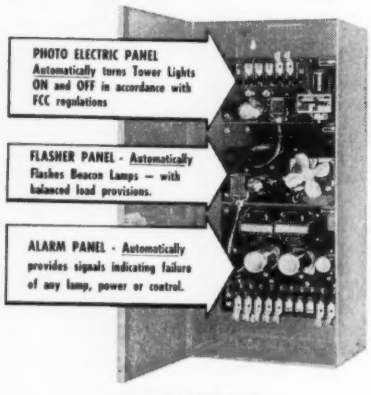
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gendered with optimism and faith, our prosperity will continue to grow and expand and the American way of life will continue to be the symbol of world progress. And, as you continue to grow, expand, and prosper, keep your heart overflowing with gratitude for the infinite blessings that you now enjoy. And may God direct you, guide you, control you, nourish you, and sustain you, in helping you to become a better man and a better salesman"—and if I may add, a better telephone man.

What are we waiting for—let's rattle the sales basket like my dad used to rattle the feed pail for his customers—his hogs. Let's attract our customers and sell our service.

REPORT OF ACCOUNTING

Continued from page 88

poses formed the basis for much of this discussion. Since that time the Treasury Department has issued tentative regulations dealing with the administrative features of the law. Regulatory authorities, too, have become interested in the subject and have inquired into the accounting aspects of the matter.

The association, represented by its Accounting Committee, participated in the Treasury Department hearings along with other taxpayers and taxpayer groups. Comments concerning the proposed regulations were submitted at that time. Similarly, the association made known its views concerning the various accounting proposals advanced by regulatory authorities.

Since that time several of the state commissions have issued accounting orders dealing with the subject of accelerated depreciation under the 1954 Internal Revenue Code. The accounting treatment prescribed in those orders was, for the most part, consistent with the association's recommendations.

North Carolina Independent Authorized to Sell Bonds

The Norfolk & Carolina Telephone Co., Elizabeth City, was authorized by the North Carolina Utilities Commission on Oct. 8 to sell $500,000 worth of sinking fund debentures to raise money to retire bank loans and to improve the company's facilities (TELEPHONY, Oct. 8, p. 42).

The debentures will be bought by The Connecticut Mutual Life Insurance Co. of Hartford, and will carry four and one-eighth per cent interest.

CONTINUING PROPERTY

Continued from page 94

making purposes within the last few years; if so, it may be possible to use that as your starting point bringing it up-to-date by the use of subsequent records, or a recent dial conversion could make it possible to obtain the desired records by reconstructing your plant accounting transactions subsequent to the conversion.

Another approach is facilitated by the rapid growth of telephone plant experienced by many companies during the last few years which may make it feasible to construct eighty or ninety per cent of the required information from your present records. The remainder being relatively insignificant, could be lumped as installations prior to a given date. Furthermore, don't forget that your supplier might be able to give you considerable help.

In any case, I would suggest that the necessary data be recorded for current plant additions so that over a period you could build almost a complete record. Remember that the sooner you start such a record the cheaper it will be.

I know that there is much doubt as to the economic feasibility of keeping continuing property records, but it is my belief that if they are used to the fullest extent possible they will be a profitable undertaking for most companies.

Indiana Association Honors W. Beck, Retiring Manager

Many friends and associates of W. H. Beck gathered at the Claypool Hotel, Indianapolis, Ind., at a luncheon given in his honor on Sept. 29 at the time of his retirement after 28 years of service as general manager of the Indiana Telephone Association.

A graduate of Purdue University in 1915, Mr. Beck entered the telephone industry in March 1917, in the commercial engineer's department of the Central Union Telephone Co. of Indianapolis. Later he served as an appraisal engineer on the staff of the Indiana Public Service Commission. In January 1920, he became assistant manager of the Lafayette Telephone Co. He began his long connection with the Indiana Telephone Association in April 1928.

Paying personal tribute to Beck for his many years of service to the telephone industry with short addresses were: R. V. Achatz, general manager of the Southern Indiana Telephone Co., Aurora; Hugh A. Barnhart, president

of the Rochester (Ind.) Telephone Co., and Frank E. Bohn, chairman of The Home Telephone & Telegraph Co., Fort Wayne. Harry S. Hanna, president, Indiana Bell Telephone Co., was unable to be present but paid tribute to Beck in a message which he sent for the occasion. Herbert E. Hussey of

H. E. Hussey (right), Indiana Telephone Association president, presents W. H. Beck, retiring association general manager, with a wrist watch at a luncheon in Indianapolis.

Lafayette, president of General Telephone Co. of Indiana, Inc., and president of the Indiana Telephone Association, presided at the luncheon.

At the conclusion of the program Beck was presented with a gold wrist watch by President Hussey. The watch bore the inscription: "To W. H. Beck with appreciation from his Indiana telephone friends, 1955."

Mr. Beck is a member of the Independent Telephone Pioneer Association and Telephone Pioneers of America. Mr. and Mrs. Beck have purchased a home at Sarasota, Fla., where they have taken up residence.

Beck has been succeeded by George A. Schumacher, who joined the staff of the Indiana Telephone Association on Oct. 1, 1954.

Alabama Company Exchange Leveled By Dynamite

A dynamite blast which rocked the town of Hamilton, Ala., and shattered windows a block away totally destroyed the telephone exchange of the Alabama Telephone Co., Fayette, at 11:40 p.m. on Oct. 1.

An automatic system had been installed in 1952. The exchange building, 20 x 30 feet in size, and constructed of 8-inch concrete blocks veneered with brick, was demolished. Bricks and scattered concrete blocks were blown over a wide area of the city, county seat of Marion County.

A lady who lives very near the demolished building said she was awakened a short time before the explosion by car lights reflecting into her bedroom window and saw two men carrying something from a car into the darkness behind the exchange.

She said a few moments elapsed while the men were in the darkness beside the building and then they ran to the car and sped away with tires squealing. A few seconds later she said she was almost "rocked" from her bed and it seemed like the whole town was falling in.

State and local officers immediately began a search for two men suspected of setting off the blast which caused an estimated $65,000 damage to the Hamilton exchange.

It was reported that last April, dynamite was set off on the roof of the Hamilton exchange. The explosion caused damage to the building roof but not to the equipment.

That dynamiting and cutting of the Alabama company's lines took place during a lengthy strike which began in Aug., 1954 and lasted 53 weeks. Striking employees from the company's Haleyville, Fayette and Reform exchanges picketed the Hamilton exchange.

It was also reported that some of the former employes of the Alabama

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Telephone Co. had been affiliated with the Communications Workers of America and were among those who went out in the August 1954 strike. The CWA notified the company in August 1955, after picketing company exchanges for one year and 10 days, that it was withdrawing its pickets.

Hamilton police estimated that from 10 to 20 sticks of dynamite were used to level the exchange building.

Obituaries

WYATT CARL WILKIN, 65, formerly manager of the East Kansas Telephone Co., Nortonville, Kan., died in Topeka on Sept. 12.

His service in the telephone industry began in Burlingame, Kan., in 1904 and concluded with his retirement a few years ago from the East Kansas company managership, which he had held for many years.

Mr. Wilkin was president of the Kansas Telephone Association in 1950 and 1951.

*

OTTO COLVIN, 66, founder and owner of the Alma (Okla.) Telephone Co., died on Sept. 26.

Mr. Colvin established the Alma company over 35 years ago and has operated it continuously since then. At the time of his death, the Alma exchange was serving approximately 600 stations and seven toll channels into the town of Duncan, 25 miles away. When businesses left the little town of Alma, he followed them to nearby small towns and continued service with his lines.

Another part of his telephone philosophy involved extending service to distant would-be subscribers in the belief that a slightly higher-than-usual rate for 24 months plus the new subscriber's toll business—and eventually the business of his neighbors—would justify the extension of service.

*

JACOB SCHNEIDER, 43, equipment foreman of The Lincoln (Neb.) Telephone & Telegraph Company, died unexpectedly at his home at Lincoln on Oct. 7.

Mr. Schneider joined the company in 1931 as an apprentice switchman and later became an installer and repairman of central office equipment before his appointment as equipment foreman in 1953.

He is survived by his wife, Doris, a former Lincoln T&T employe, a daughter and two sons.

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